THE DUBLIN

QUARTERLY JOURNAL

OF

MEDICAL SCIENCE.

NOVEMBER 1, 1851.

PART I.

ORIGINAL COMMUNICATIONS.

ART. VII.—*Observations on the Hemorrhages.* By SIR HENRY MARSH, Bart.

INTRODUCTORY to the consideration of the more important of the hemorrhages, I shall make some remarks upon *Epistaxis*.

In the works of systematic writers this variety of blood-flow is, with few exceptions, deemed so trivial, so unimportant, that scarcely a short chapter is devoted to its distinct consideration. Yet, if closely looked into in all its bearings, relations, and varieties, it will be found, by both the speculative and the practical pathologist, replete with interest. One form, which I shall term the spontaneous or idiopathic variety, furnishes us with the surest index of that state of the system termed the hemorrhagic.

Of the hemorrhages this is generally (there are, however, exceptions) the least formidable variety; it is, nevertheless, the most frequently valuable as a constitutional index.

Furthermore, there have been cases of epistaxis (and of these not a few) in which the torrent of extravasated blood has been so copious and so prolonged, as seriously to peril life; and in the treatment of which sound judgment and promptitude in action have been imperatively demanded. Judgment, to determine the moment when, without injury to the patient (for it is often a salutary effort of nature), the hemorrhage may be checked. Promptitude, in effecting, speedily and thoroughly, the object of arresting the destructive overflow of the vital fluid.

Close observation of the natural process by which this exudation is effected, affords much useful instruction, and teaches us what the true nature is, of many of those internal and unseen hemorrhages, which were formerly, and still are popularly, referred to the rupture of the trunk of a blood-vessel. This, doubtless, is the occasional, but comparatively rare cause of a fatal hemorrhage. The most frequent cause of hemorrhages, often fatally profuse, is,—as may be observed in epistaxis, capillary exudation,—blood extravasated, not from an arterial or venous trunk, but from myriads of turgid capillary and exhaling vessels.

A remarkable case, elucidating this truth, occurred at Steevens' hospital. A young man labouring under hemoptysis was admitted a few hours before my morning visit. Having spoken to, examined, and prescribed for him, I passed on. Whilst talking to the patient who lay in the next bed, I heard a gurgling sound and turned round: the man to whom I had but a moment before been speaking was dead,—was suffocated. A minute and careful examination disclosed neither tubercle, nor cavity, nor consolidation, nor lobular nor diffuse apoplexy, nor ruptured trunk, in any part of the parenchyma of the lungs; all the larger bronchi were nearly filled with blood, which was coagulated in them, particularly at and about the bifurcation, so as to obstruct the ingress of air. It was a case of bronchial hemorrhage,—of copious sweating of

blood from innumerable capillary tubes distended with blood. I say sweating, because I doubt there being any rupture or breach of surface.

In some forms of fever, sweating so profuse has occurred as to soak through the bed, and to accumulate in large quantities in a vessel placed underneath.

A capillary extravasation of red blood may be as profuse as a capillary exudation of white blood. A mucous membrane may copiously sweat blood; I have seen the same thing happen from the pores of the external skin of the face. One case, a very remarkable one, I shall briefly refer to. The patient was a young woman four or five and twenty years of age; herself intensely strumous, as were also her parents and brothers; she was subject early in life, both before and after puberty, to spontaneous epistaxis. She was attacked with fever. The symptoms presented the usual aspect of scarlatina: a dusky red rash was universally diffused, with sore and swollen throat, but no ulceration. There was a well-marked febrile movement in the system. On the third day the whole characters of the case were altered: fever subsided, the throat was no longer complained of. Quite suddenly, petechiæ, some very small, some as large as a split pea, appeared under the cuticle, and were rapidly scattered over the whole surface; their colour was livid, and they soon became black as ink. After the lapse of a few days dark grumous blood began to ooze from the gums, from all the points of junction of the internal and external skins, and from the nares, and appeared mixed with the urine and fæces; patches of ecchymosis stained the skin over large spaces. The debility, vascular and muscular, was extreme, and the fetor emanating from the breath and whole person in the highest degree offensive. All signs of scarlatina vanished.

In this miserable state, with a gradual augmentation of every worst symptom of purpura hemorrhagica in its most malignant form, she lingered on for nearly three weeks.

For many days before death the following remarkable phe-

nomenon manifested itself. Blood oozed and descended in streams from the pores of the skin of the face, and, of all the external skin, from those of the face only. With intense interest I watched the process. The surface having been wiped clean, minute globules of dark blood were seen to exude from every pore; these rapidly increased in size, coalesced, and formed streams which flowed on every side; a profusion of blood was thus extravasated, in like manner as drops of rain increase in size in descending, unite, and form tortuous little rivers, on the glass of the window of a carriage.

Whether attributable to the great tenuity of the Schneiderian membrane, connected with the delicacy of the sense of smell, or to the highly vascular net-work of this membrane, or to the copiousness of the supply of blood to the brain, or to all unitedly, certain it is, that of all the hemorrhages, that most frequent of occurrence is epistaxis.

To this variety of hemorrhage some are much more prone than others, and this may depend not only on constitutional causes, such, for example, as mal-organised blood, but also upon superior delicacy of the mucous membrane and its vessels; a condition of mucous membrane, as well as of external skin, frequently characteristic of struma. Whatever be the cause, the fact is certain, that blood streams from the nares with more facility than from other mucous surfaces.

This is the case, in varied degrees, at every period of life, but much more remarkably so at the extremes of life; the most frequent time of occurrence of epistaxis is, however, during the period of growth. I have many interesting cases recorded which prove that this hemorrhage, having appeared in early youth, disappears during mediæval life, and returns as years accumulate and old age approaches. The period of senility varies much in differently constituted individuals, and is hastened or retarded by the events and habits of the past life.

It is a curious fact that the epistaxis of the growing period of life should, in so many instances, resume its sway toward

its close. It may be termed the *Epistaxis redux* of advanced age. Within the last few days I attended a lady, now in her seventy-fourth year, affected with severe hemoptysis. Thrice before, several weeks having intervened, she was similarly affected, and twice previously to the attacks of hemoptysis, she bled profusely from the nose. Inquiry elicited the following facts: In early life, antecedent to the full establishment of the catamenia, she had been a martyr to idiopathic epistaxis; at the menstruating periods she suffered habitually much pain, and the discharges were very profuse, and at the period of the cessation of the menses, when they recurred at long and irregular intervals, the hemorrhage was excessive, and the blood came down in large clots. She had been married at a young age, but had never been pregnant. This old lady does not appear to labour under any organic disease; the heart's action and the breath sounds are perfectly normal. I have on record several equivalent cases.

Considering, then, the facility with which blood is exuded from the nares, it is not contrary to anticipation that mental emotions should so affect the vessels of the brain, as frequently to give rise to epistaxis. Congestions, inflammations, and diseases of the brain, are frequently preceded and accompanied by epistaxis; this I shall have occasion hereafter more particularly to notice. Those mental emotions which produce cerebral congestion (for some, not all, produce this effect), are often signalized, and relieved too, by a flow of blood from the nares. Epistaxis is thus often a naturally provided safety-valve. The following event, of which I happened to be an eye-witness, illustrates this principle. A child of some two and a half or three years of age, in attempting to descend a flight of stairs, fell, and rolled down to the first landing-place. He was much hurt, and cried bitterly. The nurse, a strong plethoric woman, greatly attached to the child, ran to take him in her arms; the child's father, at the head of the stairs, sternly forbade her to

touch him; she was compelled (standing at the foot of the stairs) to look on. Another attempt (after many efforts and touching appeals for help) was made by the child to descend. Again, he fell. The nurse could endure it no longer; her feelings overpowered her. She rushed up stairs, took him in her arms, and exclaimed, in a highly excited tone, "If it cost her her life she would save the child." She became deeply flushed, and a copious stream of blood rushed from both nostrils. This woman, whom I had frequent opportunities of afterwards seeing, had never been subject, previously or since, to any form or variety of abnormal hemorrhage. This was a well-marked instance of a strong mental emotion causing epistaxis of temporary origin, and altogether exempted from any pre-existing or hereditary hemorrhagic diathesis. I shall, on a future occasion, notice how frequently this diathesis, connected with struma, is hereditary.

A lady, in her fortieth year, of florid complexion, and uncontrolled temper, in a fit of furious and unrestrained anger, was seized with epistaxis. Blood from both nostrils flowed in profusion, and persisted so long that her family became seriously alarmed. When I saw her, she was nearly pulseless; there was a death-like pallor present, and a cold, clammy perspiration; her voice was feeble, and she could articulate only in a whisper, yet she did not appear to be alarmed. There was no time to be lost; much blood still flowed; much descended from the posterior nares, and was swallowed; some hours previously she had vomited blood. Antecedent to my visit, all the usual means to check the blood-flow had been in vain employed. Upon close examination it was ascertained that the flow of blood was much more profuse from the left than from the right nostril: by means of a flexible catheter passed along the floor of the nose, a plug, with a strong silk thread firmly attached, was through the mouth introduced into the left posterior nostril. This completely controlled the blood-flow at

that side; as it was not desirable too suddenly wholly to arrest the bleeding, the other nostril was not plugged. The loss on the right side became now comparatively small.

So much distress, so many unpleasant consequences have occasionally arisen from the plugging of both nostrils, that, whenever practicable, one of the air-passages should be left free. The double plug is often needlessly applied. Sometimes, however, it is unavoidable. It may be well to remark, that if sponge be used for a plug, it is better to enclose it in lint, otherwise, when distended by moisture, it may so insinuate itself into the narrow spaces between the delicate bones of the nose, as to cause difficulty and even injury in its removal.

Months elapsed ere this lady recovered in health, strength, and complexion, from this profuse and prolonged nasal hemorrhage. In early life she had been subject to idiopathic epistaxis; her menses were always superabundant, sometimes extremely profuse. At each of her confinements her losses of blood were enormous. About a week before the attack of epistaxis she had menstruated copiously. Her habits of life had always been temperate. Thus, in this case, a fit of anger, or rather of fury, was the exciting cause of the epistaxis. But its dangerous profusion is to be attributed to the pre-existence of a well-marked hemorrhagic diathesis.

The leading facts of another somewhat similar case shall be briefly detailed.

Mrs. S., aged 49, has ceased for a year and a half to menstruate. She is now labouring under organic disease of the heart. The symptoms indicate the existence of contracted orifice of the mitral valve. She has had two severe attacks of rheumatic fever, one before puberty, one at the age of 26. Eight years have elapsed since she first complained of dyspnœa and palpitation. Thirteen years ago she sustained a severe mental shock, by the sudden and unexpected death of her mother, to whom she was fondly and devotedly attached; the more, perhaps, because, though long married, she was child-

less. The mental emotion produced by the suddenly imparted news of her mother's death was very great; she was seized with violent headach, which was followed by most profuse epistaxis; for three days the hemorrhage never ceased. She lived in a remote part of the West of Ireland, and it was not until the fourth morning after the commencement of the attack that the physician reached her house; he found her pulseless, and apparently dying. He plugged both nostrils; she was unable to articulate, and with difficulty could swallow; she lay for upwards of three weeks in a state of insensibility: this period of time was a blank in her existence. She slowly recovered, but her natural complexion, vigour, and strength, she has never since then repossessed. In her case it is especially remarkable that, from the earliest age up to the full period of puberty, she had been subject to idiopathic epistaxis, so much so as to interfere with all her girlish amusements and occupations. The flow of blood was never during her early life profuse, but occurred so frequently, sometimes spontaneously, sometimes from the slightest causes, that she lived in a state of perpetual apprehension. When the menses were fully established the epistaxis ceased, and did not again recur till, as related, a powerful mental emotion recalled the latent predisposition, and accounted for its all but fatal persistence and profusion.

In the pages of history we meet with several instances of hemorrhage produced by the most overwhelming of mental influences, wounded pride, thwarted and disappointed ambition. A Doge of Venice burst, as is narrated, a blood-vessel, and died suddenly, when he heard the bell of St. Mark's announce by its toll the appointment of his successor. At Salisbury, the perverse, mentally blind, and unfortunate monarch of England, James II., was, on the eve of an expected battle which he never fought, seized with epistaxis. It continued, and confined him to bed for three days.

The influence of augmented heat or caloric upon the cere-

bral circulation, becomes a frequent cause of temporarily excited epistaxis. Hence it is that, at the hottest seasons of the year, hemorrhages in our climate are most frequent. Hence also it is that an overheated bath, heated rooms, indulgence in ardent spirits, the sun-stroke, violent exercises, so affect the circulation that hemorrhages oftentimes immediately ensue. Intense thought, long persisted in, renders the vessels of the brain turgid, and gives rise to a blood-flow.

Hence, too, the great imprudence and injury of ordering those patients threatened with phthisis, who evince the hemorrhagic diathesis, to overheated and dry climates; those who labour under what I have elsewhere termed hemorrhagic phthisis should never be sent to a climate which tends directly to augment the existing and often fatal evil.

Those causes which suddenly excite and stimulate the heart's action, so as to propel blood more rapidly to the brain, do, in many persons, give rise to epistaxis. In fevers, at the commencement of the stage of reaction, this is especially and strongly exemplified. A flow of blood from the nares is the starting-point of many fevers, of none more frequently than the Rubeolous.

Some months since I happened to attend two boys, each about ten years old, in the same room. They were play-fellows and companions, but not relatives. I was much struck by the contrast between these two cases. One possessed a sound constitution, free from any hereditary taint, and had never been affected with idiopathic epistaxis. The other had not long recovered from a tedious and prolonged succession of strumous abscesses of the cervical glands, which left characteristic and deforming scars and cicatrices. From infancy he had been prone to distressing and perpetually recurring attacks of epistaxis. Twice the blood-flow was seriously profuse. Both these boys were attacked, within a few days of each other, with measles. At the time when the rash was beginning to appear they both complained of headach, and they both bled

from the nose; the boy with untainted constitution had no recurrence of the bleeding, was greatly relieved by it, and passed through the disease without one untoward symptom; the boy who was marked with the signs of struma (both his parents were intensely strumous), during three days bled so frequently, so copiously, that his life was endangered. The former was in a few days perfectly restored; but months elapsed ere he who was marked with struma resumed his former ruddy and deceptive appearance of health.

Thus were evinced, in strongly contrasted relief, the temporary and salutary epistaxis of a perfect constitution, and the protracted and exhausting epistaxis of the distinctly impressed strumo-hemorrhagic diathesis.

Here it may be noticed how very distinct the hemorrhage of incoming fever is from that which takes place towards its close. Epistaxis is the most frequent variety of bleeding during the hot stage; intestinal, sometimes uterine, when the fever is advanced; and when, at this stage, it, or any other variety of hemorrhage, sets in profusely, it is a most formidable symptom, and indicates the great change which has been wrought by continued febrile action in the component ingredients and constituency of the blood. At the ingress of the re-action of fever no material change has as yet been produced; towards the close the blood has been thinned and altered.

Of all the signs of the febrile movement the most invariable is wasting. No matter what the type, this is the most uniform result. Scanty are the supplies; the primary assimilative function is, in a great measure, suspended; so must be that of sanguification. The body feeds upon itself: as fever progresses the blood becomes more and more attenuated; and in those fevers which are caused by malaria and by animal and other poisons, the blood becomes so deteriorated, so reduced in tenacity and density, that it oozes and is exhaled from mucous surfaces. Thus a passive hemorrhage is produced, altogether distinct from the active hemorrhage which so frequently,

at the incoming of fever, relieves the tension and increased action of the vessels of the brain.

The hemorrhages of incoming and outgoing fever are as distinct, the one from the other, both theoretically and therapeutically, as any two symptoms can well be.

Here, however, we must carefully avoid confusion: we must endeavour (the diagnosis is not always an easy one) to distinguish between the bleeding of exhalation and that of ulceration. In many fevers, intestinal ulceration with hemorrhage marks their advanced period.

In all the hemorrhages this is a most important point of distinction; in none more than in the uterine; in truth, it is the pivot on which the treatment mainly turns. The same remark applies to epistaxis.

A gentleman, aged 56 or 57, who had just returned from the Continent, told me that, for the previous five weeks, he had been harassed with repeated attacks of epistaxis; not a day passed without a frequent dropping of blood from the nose; he was afraid to drive out, to take part in public meetings; all his pleasures and pursuits were interfered with and spoiled; often on awaking he found his pillow stained with blood; he never lost much at a time, and was rather annoyed and distressed than materially debilitated. He had never till then bled from the nose, nor had he ever before been subject to any form or variety of hemorrhage. This fact led to a minute local examination, and then it was that the true source of the bleeding was discovered. A vascular spot of ulceration, difficult at first to see, became apparent. A few applications of the actual cautery completely cured the epistaxis. This gentleman had been, for the five weeks previously, subjected to cuppings at the back of the neck, astringents, applications of ice, saline aperients, and all sorts of dietetic restrictions. The cause of the oversight was, that he had never felt nor complained of any local pain or uneasiness.

I have met with several cases, in many points identical with

that now detailed. Nay, I have seen cases of nasal polypi and consequent epistaxis treated constitutionally, the local source of the bleeding having been left wholly unexplored. Such an oversight redounds not much to the glory of medical sagacity. In epistaxis, as well as in all other hemorrhages, a most searching analysis, local and constitutional, is required, to prevent the grave diagnostic error of confounding a hemorrhage which results from local disease, ulcer, or injury, with that which springs from a constitutional cause. Obvious as all this is, it is surprising how often such an oversight is committed.

What advantage can possibly arise from treatment exclusively constitutional, in cases of uterine ulcerations or polypi, or retained placenta, or other purely local sources of hemorrhage? When, however, as it often happens, ulcerations are co-existent with the hemorrhagic diathesis, the treatment, both local and constitutional, is imperatively indicated. So it is with epistaxis: if locally caused it will not be constitutionally cured.

One of the most frightful cases of epistaxis I ever witnessed occurred in a case of organic disease of the heart. The gentleman was between thirty and forty years of age, upwards of six feet high, with very expanded chest, and great muscular development. He was born in a tropical clime, and ardent in all his passions as the sun under whose burning rays he was nurtured. Hypertrophy of the heart, with disease of all its valves, to an extent such as I had never before nor since witnessed, was the fearful disease under which he laboured. In no instance have I heard the cardiac impulse at so great a distance from the chest. In no instance have I seen so extensive an undulation of the parietes of the left thorax and epigastrium, and elevation and sinking of the clothes that lay on the chest. In no instance has the stethoscope been impinged against my ear with so much force. I was urgently requested to go without delay to see this gentleman; I found him bleeding in torrents from both nostrils; he had been thus bleeding for hours before

my visit; the quantity of blood extravasated was enormous. Before I left the house the hemorrhage had abated. An intelligent medical pupil, a friend of his own, remained with him. The bleeding returned with so much violence that his friend, apprehensive of fatal consequences, was induced to plug both nostrils, from the posterior nares, with plugs well steeped in oil of turpentine; after some time heat and tingling were produced, soon, burning pain, which increased so much that it became necessary to remove the plugs; even after their removal the pain increased so as to be absolutely maddening. He lived for several weeks, but never afterwards bled from the nose. Probably, as a consequence of the action of the turpentine, the membrane remained permanently thickened, so as to render future bleeding improbable.

Possibly, in some persons of hemorrhagic diathesis, a state of the membrane, analogous to that produced here by the application of turpentine, may naturally exist and impede the flow, which would otherwise take place from the mucous surface of the nares.

I have repeatedly heard some, who were harassed with deep flushings, headachs, facial eruptions, heat of head and face, say, they would give the world to bleed from the nose, and they had all the sensations, such as heat, tingling, turgescence of vessels, throbbing, and redness, which very often precede and forewarn a flow of blood from the nares.

In these cases I have known much mitigation of symptoms to ensue after the repeated application of leeches to the septum. This method of leeching, some are too irritable to endure. In a very few it has produced violent sneezing. As a general rule, it is, in suitable cases, an excellent method of abstracting blood. A useful hint may be derived from the action of the turpentine; though, in this case, it was too violently applied. This gentleman died from the sudden rupture of one of the tendinous chords of the mitral valve. The sound of the rupture was audible to himself. It occurred in a moment

of anger and indignation: he had been most unkindly treated by one who should have been the last so to treat him. From the moment of the rupture he was in agonies; they endured for six hours, when he expired. The heart was preserved in the museum of the Park-street School of Medicine, and was one of the most valuable preparations amongst those of that excellent pathological collection. This is one amongst numerous instances of a temporary epistaxis caused by an organic disease.

Disease of the brain is not unfrequently accompanied by this symptom. In the month of December last I was sent for in haste to see a lady in her fifty-eighth year, who suddenly, and without any premonition, was, whilst sitting at dinner, seized with severe epistaxis; this was her first and, up to the present time, her last hemorrhagic seizure. It was preceded by obscure signs of cerebral disease. Since the attack of epistaxis the evidences of gradually increasing organic disease of the brain are unequivocal.

The following case of a single occurrence of epistaxis may (as illustrative of the subject) be worth placing on record: Mr. S., between fifty-five and fifty-eight years of age, of low stature, large head, short neck, very large chest and trunk, with comparatively diminutive extremities, has been for years subject to that chronic form of bronchitis and habitual catarrh, which abates during the summer, but never wholly departs, accompanied by expectoration, and an habitually restricted and wheezing respiration. He retired to rest in the winter season with a more than usual amount of thoracic oppression. He slept heavily, but unrefreshingly. Early in the morning he awoke, with intense headach and throbbing of the vessels of the head, heat, and flushing. Soon blood began to flow from both nares, and that to a very considerable amount. Finding that from the natural blood-flow no prompt relief was derived, and that the head symptoms were becoming even more urgent, I determined to open a vein in the arm. He was raised in bed:

a full stream of blood issued from the orifice. I remained with him, and allowed the blood to flow till the force of the cardiac and arterial impulses was subdued. He became slightly faintish; the epistaxis ceased, and every urgent symptom was speedily relieved.

Before taking a final leave of that part of the subject which relates to the occasional and temporary conditions of the vascular system, which give rise to epistaxis, a few words may be devoted to the consideration of one of its very frequent varieties, which, conjoined with other hemorrhages, holds a prominent position amongst the symptoms indicative of a remarkable change in the texture of the blood, a change of which sea-scurvy and purpura are the clearest types.

Sea-scurvy is primarily the result of a nutriment either deficient in quantity, or injurious in quality, generally of both. This altered condition of the blood, and its consequence, hemorrhage, may arise from purely dietetic causes. It is a remarkable fact, that this change in the structure of the blood is accompanied by a corresponding change in that of the solids. The gums become spongy and bleeding. Ulcers are readily produced, and refuse to heal. Old and perhaps long-healed sores re-ulcerate; previously united fractures disunite; the muscles are enfeebled; and the brain and nerves, not deriving from the blood a full organic supply, are prostrated in function; the spirits are miserably depressed; the will loses its influence, and death is preferred to intellectual or muscular labour; also, blood oozes from many surfaces, frequently from the nares, and the effluvium emanating from the breath and person is often highly fetid.

In contemplating the causes of sea-scurvy, it is necessary to take into account the tedium and monotony of a seafaring life. These, I am informed by persons who have spent weeks and months without ever seeing land, are most irksome and depressing. Hence, the sudden and extraordinary restorative effects of exhilaration of the spirits. The sight of land, the pros-

pect of plentiful supplies of wholesome and vegetable food, by raising the spirits, by improving the nervous and respiratory functions, go far in promoting recovery, even before these supplies come into operation. Hence, too, the important rule, that it is the duty of those in command in long voyages, to provide for the ship's crew not only ample supplies of wholesome food, but also such varied amusements as shall render the time spent on the ocean less wearisome, tedious, and monotonous.

During the late famine, many patients, affected with purpura, presenting all the signs of sea-scurvy, were admitted into the wards of Steevens' hospital. They did not belong to the class of the destitute.

I learned that their whole sustenance was limited to a very stinted daily allowance of wheaten bread. Weak tea they took in large quantities. No butter, scarcely any milk, and very little sugar. Some partook largely of weak and adulterated coffee. The sensation of want and emptiness from insufficiency of solid food, was in a measure counteracted by drinking in large quantities these weak infusions. Thus an insufficient and watery diet, too scantily supplying the staminal principles necessary to effect a perfect sanguification, is capable of giving rise to all the distressing symptoms by which purpura is characterized, and amongst them to many forms of hemorrhage, including epistaxis. In these cases we may aver, that there are simultaneously softening of the blood and softening of the solids. Such cases of purpura, if not too far advanced, are perfectly curable. The treatment is mainly dietetic. The vegetable acids materially assist in restoring a healthy sanguification. In the hospital we have given, with good effect, to these patients cold infusion of Peruvian bark, mixed in equal proportion with lime-juice, having added, in many cases, the citrate of quina, and as much substantial food as an enfeebled stomach could with facility digest. A few of these cases which resisted treatment evinced before death signs of dropsical effusions, as if to show how an abnormal condition

of blood leads first to effusions of coloured blood, then to effusions of uncoloured blood, often to both combinedly, and also to prove how intimately connected the one with the other are the passive hemorrhages and dropsical effusions.

The epidemic and fatal dysentery, or, as it has not inaptly been termed, bloody flux, which has lately and during former famines swept hundreds away, is mainly referable to deterioration of the circulating fluid, caused by insufficient and unsuitable nutriment. Its origin is dietetic, and the most efficient item in the treatment is likewise dietetic.

To another source of sanguineous exudation, nearly akin to that to which allusion has just been made, we must devote a brief consideration. During the progress of protracted chronic organic disease, the whole circulating mass undergoes a slow, gradual, progressive change, which ultimately gives rise both to hemorrhage and dropsy. During the long course of these diseases, the digestive and respiratory functions are impaired. The blood, imperceptibly, is altered, and the enfeebled exhalents allow either coloured or uncoloured blood to escape; the former usually from mucous surfaces, the latter either into the meshes of the areolar tissue, or into the serous cavities, or, as frequently happens, into both. The diarrhœas and profuse perspirations, which often characterize such cases, are referable to the same cause.

A case or two will best illustrate the subject. An officer returned to this country in broken-down health; he had suffered for many months from frequently recurring attacks of intermitting fever. The fever and ague were caused by the malaria of Hong Kong. His liver was considerably and permanently enlarged, the spleen enormously hypertrophied; he was much atrophied; but the paroxysms of ague had ceased. Soon the ankles became œdematous, and blood trickled almost constantly from the nose, and, curiously enough, it happened here, as in a few other cases of this nature which I have witnessed in which there was great enlargement of the spleen, the blood

flowed exclusively from the left nostril. The trickling of blood from the left nostril continued for many days; it ceased; he became universally dropsical. He lingered on for a long while in a hopeless condition. During the whole lengthened course of the disease he was unable to receive and digest a sufficient quantity of food (even of the lowest quality) to create a normal supply of blood. Such is the epistaxis so often symptomatic of diseased liver and spleen.

A labouring man, suffering from the effects of tuberculated liver, caused by habitual imbibition of alcohol in large quantities, was suddenly attacked with melæna. Blood was vomited, and descended through the intestinal tube to an enormous amount. He was brought to the threshold of the grave; he could neither speak nor move; for hours he was pulseless; he remained and continued to be deadly pale. There was no second attack of hemorrhage, but a dropsical effusion soon after manifested itself. The effusion into the sac of the peritoneum was very great. He derived, more than once, temporary relief from tapping. At first, the dropsy was not extended beyond the areolar membrane and cavity below the diaphragm. The upper and lower halves of the body presented a singular contrast; that above the diaphragm exceedingly attenuated; that below swollen out to a great size. Afterwards, as the structure of the blood became more and more impaired, the dropsy was universal. This man's liver presented the usual appearance of that which has been termed the whiskey liver.

About two years ago I attended a lady in her thirty-fourth year, in whom epistaxis, towards the close of the disease, appeared, at once difficult to control, and, in her exhausted state, fearfully debilitating. Before her marriage, she had laboured under chlorosis. Soon after her marriage (ten years previously), pleuritis, with great effusion, had nearly terminated her existence. The right side remained ever afterwards contracted. Her recovery, however, was so complete, that she became the mother of a fine child. About twelve months before her death,

an abdominal moveable tumour caused her much uneasiness; this disappeared. She then suffered from uterine irritation, and lastly, enlargement of the liver. Ascites, and dropsical effusion confined to the lower extremities, with sometimes profuse perspirations, sometimes wasting diarrhœas, were the prominent symptoms. About six weeks before the fatal termination of the disease, she bled periodically from both nostrils. The bleeding always took place early in the morning, on awaking from a short, broken, and disturbed sleep. The first bleeding was the most copious, and caused a sudden and great change in her whole aspect and appearance. The subsequent bleedings, which recurred daily at the same hour, were far less profuse, yet, to her, extremely debilitating. For ten days the epistaxis recurred regularly; it then became less frequent and less regular, and, for at least a fortnight before her death, wholly ceased. This patient was to the utmost possible degree attenuated. Thus was epistaxis co-existent with dropsy; and both the result of protracted chronic exhausting organic disease. Many, indeed, are the chronic diseases, which, either with or without specific fever, terminate in effusions of blood, both coloured and uncoloured.

Sometimes an altered and deteriorated condition of the blood, productive of epistaxis and other hemorrhages, is caused by the frequent and long continued introduction into the system of poisons, such as malaria, mercury, alcohol, tobacco, &c.

Not many days ago I saw, a case of a young man in whom purpura hemorrhagica, in its most fearful and fatal form, was produced solely by the habitual abuse of these poisons, particularly alcohol. His family, by his death, sustained a great loss. His habits of life were suicidal.

A corresponding case, one in many respects resembling that reported at the commencement of this paper, fell under my observation about three years since. It was that of a young man who, influenced by injurious companionship and an almost unlimited command of newly-acquired wealth, plunged un-

restrainedly into every species of sensual indulgence; habits of intoxication became so inveterate, that at no time of the day was he perfectly sober; rarely was he seen without a pipe or a cigar in his mouth; courses of mercury for the cure of syphilis succeeded each other in quick succession. For nearly three years this course of life, without any apparent detriment to health, was persisted in. In about a fortnight after he had been exposed to the infection of small-pox, he sickened; having for two days struggled against prostrating disease, he was compelled to succumb, and to remain in bed. He complained of little else than of (as he termed it) distressing lumbago. On the morning of the third day a rash was discovered; and after the lapse of some hours the exanthem exhibited the characters of the variolous eruption. Long before the vesicles approached maturation they not only ceased to fill, but so far subsided as in a great degree to lose their specific features. Livid and black were now the numerous petechial spots, of various sizes, with vibices and large ecchymoses, which unexpectedly appeared over the whole surface. It was remarkable how abruptly this fatal change took place; till then the case presented no other characters than those of variola with fever. Soon, thin, dark blood began to trickle from the nares, from the angles of the mouth, and many mucous surfaces. The odour emanating from the whole surface was insufferable. Before death he was semi-putrid. On the fourth day from the appearance of the black petechiæ, he died. Thus it was that a previously poisoned blood rendered an accidental febrile disease speedily and inevitably fatal.

It is lamentable to think how many young men there are who run this mad career of excess, unaware of the fatal sword which is suspended over them. They fling away life, health, and real enjoyment, as an untutored savage discards a valuable mass of precious metal, and clutches a string of worthless but glittering baubles. Months, even years, may elapse without any warning of danger; an attack of some prevailing epidemic,

or of inflammation or fever, comes unexpectedly upon them. The chances of recovery, the chances of triumphing over the disease are, to them who have so lived, an hundred-fold diminished. Such is the hemorrhagically fatal effect of the gradual and prolonged infusion into the system and blood of those substances which in habitual excess become slow but virulent poisons. I cannot readily forget the observation of a lady whose husband was dying of fever, to which, at an early period of the disease, the appearance of lurid petechiæ, with utter prostration, gave an all but hopeless character. She had herself abandoned all hope, having been painfully cognizant of the ruinous career he had for years previously been running. Alluding to his hopeless state, she said: "He has squandered away a fine constitution, an exalted intellect, and a princely fortune; all these valuable gifts he has sacrificed on the altar of unrestrained sensuality; on his offspring he has entailed impaired constitutions and poverty."

Several years ago I witnessed a remarkable and fatal case of supervening purpura hemorrhagica. So slight were the symptoms, that the note in which Sir Philip Crampton was requested to see this gentleman was couched in language which did not lead him to suppose that aught in the slightest degree of import ailed; it had reference principally to some trivial and non-medical subject about which he wished to speak with Sir Philip Crampton. The note concluded by observing that, if he happened to pass that way, he would be glad to see him, as he did not feel himself quite well enough to call at Sir Philip's house. I mention this to show how slight the premonitory and existing symptoms at that time were. Certainly, one not well acquainted with the earlier characters of this fatal disease might easily be thrown off his guard. Sir Philip, however, did not fail to recognise its true nature and its danger, though at his first visit there was apparently little in the characters of the case to warrant any, even the slightest apprehension. He found him sitting up,

and in the act of writing a note; he was advised to remain in bed. On the following day the prominent symptoms were, fever, a dusky red rash generally diffused, soreness of the throat, singular prostration of strength, and severepain in the lumbar region. After the lapse of a few hours the appearance of livid petechiæ, numerous vibices, large ecchymoses, particularly wherever pressure, even the slightest, happened to be applied, evinced but too certainly the rapidly fatal tendency of the disease. At the end of three days from the time when re-action was established, he expired. It was a remarkable fact that, having been cupped over the loins, black, ichorous blood never ceased to flow from the wounds inflicted by the scarificator, till he ceased to breathe. This gentleman held an official situation, which, for many hours daily, confined him to the desk. What the predisposing and exciting causes of a disease so malignant, so hurriedly fatal were in this case, I am unable to tell. Cases do occur which, in the present state of our knowledge, baffle all our efforts to throw a clear and satisfactory light upon their origin and causation.

Having thus far viewed epistaxis as arising from temporary and incidental causes, we shall pass on to the consideration of its idiopathic or originally constitutional variety.

(*To be continued.*)

Art. VIII.—*The Physiological and Therapeutical Properties of Statical, Galvanic, and Faradic Electricity* (*Electricité Faradique*[a]). By Dr. Duchenne (de Boulogne), Paris[b].

Physicians, who have made a special study of electricity as applied to therapeutics, imagined that they observed some dif-

[a] Electricity by induction. The employment of this denomination will be justified at the end of the treatise.

[b] [The translation of this memoir from the original French was made for this Journal under the superintendence of the author himself, who furnished it to us for publication; this will account for the numerous idiomatic expressions which occur throughout it.—Ed.]

ference between the properties of statical and dynamic electricity. Thus, Fallapra taught that statical electricity was chiefly applicable to paralysis of the nerves of sensation and to the muscles of animal life, and that galvanic electricity, on the contrary, was only applicable to the excitation of the muscles of organic life.

These precepts, although they are based upon no serious research, have been reproduced in all the treatises devoted to the subject. They do not, however, accord with the physiological properties of the different kinds of electricity; properties which were, doubtless, unknown to those who drew up these precepts, as I shall show. It is not, then, astonishing that no account has been held of these precepts in practice. Nevertheless, it would be wrong to conclude, that the therapeutical action of electricity is always the same, whatever may be its source. I hope to establish in this treatise, that statical electricity, galvanic electricity, and electricity by induction, possess, each, special physiological and therapeutical properties, and that each of them answers to certain appropriate indications.

A.—PHYSIOLOGICAL PROPERTIES OF STATICAL ELECTRICITY.

The usual methods of administering statical electricity are, by simple contact, called the electrical bath, by sparks, and by means of the Leyden jar. A current of electricity has also been made to pass through the body, placed in contact with the conductor of an electrical machine, but without being insulated. This last method is so entirely without action, that it does not merit consideration.

1. *Electro-Positive and Negative Baths.*—The electrical bath has been for a long time considered as one of the most valuable therapeutical agents. According to Giacomini (as quoted by the author[a] of a recent article on electricity), the electro-positive bath ought to be administered in the following man-

[a] Bibliothèque du Médecin Praticien, vol. xiv. p. 90.

ner. The patient is to be insulated, and put in communication with the conductor of the apparatus. The whole surface of the body is thus electrified, whilst the surrounding air is, by induction, rendered electro-negative. The charge of positive electricity is limited to, and probably accumulated on the cuticular surface, for it does not affect in any manner the internal structures; the pulse, the secretions, the intellectual functions, and the respiration, remaining unchanged, whilst this accumulated electricity, which constitutes the bath, escapes at all points of the epidermis (the hair, nails, &c.).

Giacomini attributes a hyposthenic influence to the electro-negative bath, consisting in abstracting from the body a quantity, more or less considerable, of its natural electricity. This is the mode of administering it: the patient is insulated, and his body, or rather the part affected, is connected with the rubber by means of a conductor, and, whilst the disc is made to turn, the electricity is discharged as fast as it accumulates. It is evident, in the opinion of Giacomini, that the electricity furnished by the rubber is supplied by the nerves of the patient, instead of being supplied by the earth, as in the electro-positive bath.

This electro-physiological theory does not, most certainly, rest upon experiments; for if a person in a state of health be subjected to the influence of an electro-positive or negative bath, no one of the phenomena, indicating a stimulating or hyposthenic effect, is to be observed.

2. *Electrization by Sparks and by the Leyden Jar.*—Whatever may be the form of the exciter in connexion with the conductor of the electrical machine, or whatever may be the distance separating it from the skin, the electricity evolved by the machine in action unites with that of the body at the surface of the epidermis, with a greater or less degree of tension. The exciter with a pointed extremity, allows the electricity to escape easily; with the spherical exciter, the tension is greater, and the sparks less frequent; but neither gives more

than one spark at each discharge; whereas, the exciter with a flat surface, when placed within a short distance of the skin, allows several sparks to escape at a time.

The metallic brush acts in the same manner as the exciter with a flat surface, that is to say, it never gives rise to more than two or three sparks at a time, whatever may be the number of threads that compose it[a].

Statical electricity, applied by means of the exciters, the special action of which I have just shown, always gives rise to the same sensations, which differ from one another in degree only. This sensation, which may be compared to the shock of a small, hard body striking against the skin, is always disagreeable, however slight the electrical tension may be. It is never very strong, and does not resemble that caused by a burn or by pricking, whatever may be the form of the exciter employed, though the skin may eventually redden and become more sensitive. To render it very painful, recourse must be had to the Leyden jar; but then the excitation is no longer limited to the skin, and other phenomena, which I shall describe, are developed. When the tension is feeble, the action of the electrical machine can always be limited to the skin.

Such, then, is the action obtained by an electrical machine, barely powerful enough to cause the superficial muscles to contract, especially if the areolar tissue be tolerably abundant.

[a] A brush composed of bristles has also been employed. This brush, when put in connexion with the electrical machine, and placed at a short distance from the skin, causes a slight sensation of coolness. Although a bad conductor, it nevertheless becomes charged with positive electricity, and allows the excess of this electricity to escape at the extremity of the bristles, and to unite with the electricity of the surrounding atmosphere. There results from the successive and rapid recompositions a slight current of air at the surface of the brush. It is a current of air analogous to that at the surface of the disc, when the electrical machine is in action, that causes the sensation of coolness produced by the proximity of the electrical brush of bristles. It is plain that this mode of electrization is illusory, for the natural electricity of the body is not at all influenced by it.

Besides, these contractions are confined to the fibrils, and are very incomplete.

If it is possible to limit the action of statical electricity in the skin, this can no longer be done when we wish to concentrate its power in the muscular tissue, or in the sub-cutaneous nerves. Indeed, the superficial effect of this kind of electricity is inseparable from its deep action. When we operate on the deep structures, the electrical recomposition takes place at the surface of the epidermis, and gives rise to a cutaneous sensation, which masks the muscular impression.

The electrical tension obtained with the Leyden jar enables the current to overcome the resistance offered by a considerable thickness of tissue. Electrization by means of the Leyden jar produces an energetic contraction of the muscles; but, let the tension be ever so feeble (and it can always be regulated by means of the electrometer of Lane), it never fails to cause a commotion, that is to say, a sensation which extends beyond the point excited, and has an action more or less powerful on the nervous centres.

If the exciter be placed immediately over a nervous trunk, the local sensation is like that produced by a violent contusion of the nerve, and this sensation is followed by a benumbing feeling, which extends to its remotest ramifications. When the tension is considerable, whether we act on the nerve or the muscular tissue, the shock is so violent that the whole limb, and sometimes the whole body, is, as it were, deadened.

The skin, at the point where the Leyden jar has been discharged, is gradually discoloured within a circle of from one to two lines in diameter, and in a few seconds changes to a dull white colour. The nervous papillæ become erect on the discoloured surface, which, besides, presents a slight diminution of temperature. The person experimented upon sometimes experiences a benumbing influence. Analogous phenomena seem to be produced in the muscular tissue beneath the point of the skin exposed to the action of the Leyden jar. Having

had occasion to discharge a Leyden jar upon the surface of a denuded muscle, I observed that the part became slightly discoloured, within a small space, for a certain length of time. These local cutaneous phenomena generally last from twenty to thirty minutes; once, in the case of a delicate person, I saw them last for three-quarters of an hour.

This time elapsed, the discoloured surface passes in a few minutes from the dull white to an erythematous redness, and becomes the seat of an elevation of temperature, appreciable by the thermometer, of which the individual himself is sometimes conscious.

The organic phenomena which I have just described seem to me to establish, 1st, that the discharge of the Leyden jar produces at first a profound local stupor, by suspending for a time the capillary circulation, and by diminishing the calorification of the tissues on which it acts; 2nd, that the excitation resulting from this kind of electrization, takes place by a sort of reaction, as is proved by the appearance of an erythematous redness, and an augmentation of temperature in the point before discoloured; 3rd, that this reaction takes place with greater or less facility.

B.—PHYSIOLOGICAL PROPERTIES OF DYNAMIC ELECTRICITY.

The name of dynamic electricity, that is to say, electricity of motion, has been given to galvanic electricity and electricity of induction. This electricity, evolved by the voltaic pile or by the electro-dynamic or magnetic apparatus, possesses physiological properties essentially different from those belonging to statical electricity. The most important property of dynamic electricity is its capability of being directed to, or limited in, almost all the organs of the body.

But how can an agent so powerful and so rapid as electricity be directed through the organs? This problem, so difficult in appearance, I think I have solved in a satisfactory manner. It was only necessary to analyze the phenomena of daily

occurrence, in the application of metallic conductors to the dry or moist skin. The principal facts which result from my researches, and which permitted me to accomplish the task I had imposed upon myself, are as follows:

1st. If the skin and the exciters be perfectly dry, and the epidermis very thick, as is observed in the case of persons much exposed to the air (water-carriers and gardeners, for example), the electrical currents are recomposed at the surface of the skin, without traversing the derma, producing sparks and a peculiar crepitation, but no physiological phenomena.

2nd. If one exciter be moist, and the other dry, the person subjected to the experiment experiences, at the point where the second exciter had previously occasioned only physical effects, a superficial sensation, which is evidently cutaneous. This is due to the fact that the opposite kinds of electricity are *recomposed* at the dry point of the epidermis, after having traversed the skin by means of the moist exciter.

3rd. If the skin be very slightly moistened, in a case where the epidermis is very thick, there is produced, at the points where the metallic exciters are placed, a superficial sensation, stronger than the preceding, but unaccompanied by sparks or excitation. Here the electrical *recomposition* takes place in the thickness of the skin.

4th. When the skin and the exciters are very moist, we observe neither sparks nor crepitation, nor sensation of burning; but we obtain phenomena of contractility and of sensibility, which vary according as we act on a muscle, on a nerve, or an osseous surface. In the last case we cause a pain of a peculiar character, and for this reason we ought to avoid placing the moistened exciters on osseous surfaces.

From these experiments, I think it results that we can arrest the electrical force in the skin if we wish; and that we can, without incision or puncture, traverse it, and limit the electrical action in the organs which it covers, namely, the nerves, the muscles, and even the bones.

However, it is difficult to conceive that electricity can excite the subcutaneous organs without acting, at the same time, on the skin. We might, indeed, be led to think that the sensations which are produced during the galvanization of the sub-cutaneous organs, are the result of the excitation of the skin alone, or of the simultaneous excitation of the skin and of the subjacent organs.

My experiments, which have been published in my memoir on localized galvanization (galvanisation localisée), establish that the sensation, developed during the electrization of the skin, by means of dry exciters applied to its surface also dry, is certainly the result of the excitation of the skin ; and that the sensation produced by the application of the very moist exciters to the skin, immediately over a muscular surface, can be attributed to nothing but the excitation of the muscles.

The intensity of the cutaneous sensation produced by dynamic electricity is proportional to the intensity of the current. It may pass from a simple thrilling to the most acute pain, or through all the intermediate degrees between these two extremes. By the aid of special means, its excitation can always be limited to the skin, without traversing it, whatever may be the intensity of the current. This same electro-dynamic force, directed through a muscular, or a nervous trunk, may cause the most energetic contractions, without producing those phenomena of commotion, which characterize the action of statical electricity, and which oftentimes *contra-indicate* its use.

Such are the principal effects of dynamic electricity, which, as I have already remarked, includes galvanic electricity and electricity by induction.

But each of the last-mentioned sources of electricity possesses, besides, special physical and physiological properties, which do not allow of their being indifferently applied to therapeutics. Their special properties may even comply with determinate indications, and therefore deserve to be studied separately.

a. Galvanic Electricity.

Quantity and tension being equal, all forms of apparatus which evolve galvanic electricity, possess the same physiological properties[a], whatever may be the nature of the elements entering into their composition.

Galvanic machines can be constructed so as to furnish more electricity of quantity or of tension, according to the physical, chemical, or physiological phenomena wished to be produced, but these different results are always produced simultaneously, and can never be separated from one another.

Galvanic Electricity can be applied in Continuous or Broken Currents.—The continuous current, limited to the skin, excites, in addition to the sensation before-mentioned, an organic action more or less considerable, from a simple erythema to an escharotic effect. This organic action is produced slowly, unless a powerful galvanic battery, whose plates present a large surface, be employed. The continuous current of the greatest intensity, directed through a muscle, only produces weak and irregular contractions of the fibrils. Such, at least, is the result of an experiment made on my own muscles with a battery of Bunsen, of 120 piles of plates.

The continuous current produces always phenomena of heat, deep-seated and intense, in proportion as the battery gives more electricity of quantity. Indeed, the sensation I experienced during the preceding experiment was analogous to that which a very warm liquid circulating in the limb subjected to the experiment would have occasioned. After the lapse of a

[a] The quantity of electricity which a pile can furnish depends upon the surface of the elements, and is proportioned to the extent of this surface. It produces physical effects; that is to say, phenomena of heat, light, and magnetism. The galvanic tension depends upon the number of the elements which compose the galvanic battery. It exercises both a chemical and physiological action.

certain time, these deep-seated, continuous currents produced an insupportable heat in the extremity galvanized. On diminishing the number of the elements, the phenomena I have just described decreased gradually, and when there were only fifteen or twenty pairs of plates or elements, were inappreciable.

Have the continuous currents a hyposthenic influence really on the nervous force? The reply must be affirmative, if we may be allowed to reason from *vivisections in animals to man.* Besides, we know that a continuous current, kept up for a certain time in the nerves or in the limbs of an animal, not only diminishes excitability, but produces paralysis. I made the following experiments on several healthy men, with the design of studying this question. First, I employed Cruikshank's battery (composed of sixty pairs of plates), and caused the currents to pass through the nerves for twenty or thirty minutes. Not succeeding in producing any result, I hoped for better success with a more powerful battery, and employed one of Bunsen's, of seventy piles. After the action of a continuous current from this for twenty or thirty minutes, I observed no diminution of the excitability of the nerve galvanized, nor any disturbance of the voluntary motions. Although I repeated this experiment several times, at one time with a centripetal current, at another with a centrifugal, the result remained unchanged.

The intermittent galvanic currents exercise a threefold physiological action at each intermission, one at the entrance of the current, another at its exit, and a third in the interval between these two. The physiological action observed when the current is broken, is so feeble as to be inappreciable, except under the influence of a tolerably powerful battery. For instance, with a battery of thirty pairs of plates, its action on the muscular contractility in man is not manifest, when the moist exciters are placed on a point of the skin corresponding to the surface of a muscle; whilst, by the same process, the physio-

logical action is very manifest at the entrance of the current. But the power of the interruption of the current increases in proportion to the increase of the number of the elements composing the battery. It seemed to me in my experiments, that Bunsen's battery of 120 piles produced as strong a contraction at the instant of the *interruption*, as was produced by the *entrance* of a current from a battery of 20 pairs of plates.

The physiological action intermediate between the entrance and exit of the current, is that of the continuous current; it is intense in proportion as the interval is prolonged.

The sensibility of the skin is more strongly excited by the intermittent than by the continuous current, but the latter has a more powerful organic action. The cutaneous sensation, for instance, is more painfully excited by a rapid intermittent current than by a continuous one, but the latter produces more speedily erythema, vesication, or an escharotic action on the skin. It results from my researches that the disorganizing action which the tissues undergo, ought to be attributed to the influence of the continuous current, and that the entrance and exit of this current contribute thereunto very feebly. It is for this reason, in my opinion, that the rapid intermittent current disorganizes much less than the continuous current. But as it is impossible to avoid, as I have before shown, the continuous action which takes place between the commencement and end of each intermission, it will never be possible to excite the skin by means of galvanization, without producing also an organic action more or less considerable.

The galvanic current, directed along the nerves of the fifth pair, and even along their remotest ramifications, exercises a special action on the retina, producing scintillations of light at each intermission. These scintillations are manifest, one very strong at the closing; another, much more feeble, at the breaking of the current; the third in the interval between the two former, so feeble that it is appreciable only in the dark. This special property of galvanism has never before been pointed out; the know-

ledge of it is of the highest importance to the physician, as we shall see by-and-by. To whatever point of the face or of the cranium we apply the moistened galvanic exciters, we always produce a succession of luminous sensations, very dazzling, even though the current be very feeble, provided the fifth pair of nerves be distributed to the part. The flash which is produced does not affect the retina, except on the side on which the galvanic excitation is practised; it is stronger and more dazzling in proportion as we approach the median line, and is perceived in both eyes when the exciters are placed on the median line, that is to say, where the ramifications of the fifth pair, on each side, anastomose.

It is, above all, in its influence on the muscular contractility, that the intermittent current manifests a physiological action, infinitely greater than that exerted by the continuous current.

b. Electricity by Induction (FARADISM).

Although it is somewhat inappropriate to expose here the principles which govern the phenomena of induction, I shall take a general view of these phenomena, some of which, in my opinion, have not been sufficiently analyzed.

The currents of the apparatus evolving electricity by induction, have their source either in a pile or in a magnet. They are known in science, the first under the denomination of volta-electric (electro-dynamic), the second under that of magneto-electric apparatus. Both are composed of a copper-wire, covered with silk, of variable length and diameter, closely coiled so as to form a helix, in the centre of which is placed either a bar of soft iron or a magnet. In some forms of volta-electric apparatus a second copper-wire is coiled upon the first. The electro-magnetic instruments actually in use have never more than one wire coiled upon the electric magnet, or on each arm of the magnet[a].

[a] The electro-magnetic instruments, in which the wire is coiled upon the

In order to put a volta-electrical apparatus into action, contact is established between the extremities of the upper wire and the poles of the pile. At the moment when the circle is closed, a modification is wrought in the state of the wire, and of the piece of soft iron within the coil. The wire is traversed by the current of the pile, and the soft iron is magnetized for the time. If then the circle be broken, there results a new electrical modification: the iron loses its magnetism, and the electricity of the wire recovers its natural state. It is only at the moment when this modification takes place, that the phenomena of induction, through the mutual influence of the coil and the temporary magnet on the coil, are made manifest; no physical nor physiological phenomena being observed in the interval. If a living contractile organ, the muscle of a frog, for example, be placed in the circle of the current, at the moment when the circle is closed the muscle contracts and then remains in repose. When the current is broken the muscle again contracts. The contraction at the latter period is much stronger than at the first. The same physiological phenomena are observed when a second wire is coiled upon the first; and if a galvanoscope, instead of a muscle, be placed in the circle of the second wire, the needle is seen to deviate from the magnetic meridian, at the entrance and exit of the current, but each time in an opposite direction. The current which is developed in the first wire (the current of the first order) is called the inductive current, from the fact that it induces the current in the second wire, which is therefore called the induced current (current of the second order).

Each intermission of the current is, then, composed of two phenomena of induction, one at the moment when the contact takes place, the other when it ceases. In the volta-electrical apparatus, the intermissions are effected by means of a toothed

electro-magnet, are those of Pixis and Clark. Those in which the wire is coiled round the magnet are known as the apparatus of Dujardin and of the brothers Breton. The latter is an imitation of that of Dr. Dujardin.

wheel, put in movement by the operator, or by a special mechanism, or by means of a little apparatus called the *commutator*.

Let us examine what takes place when a magneto-electrical apparatus is put in action. An armature is placed at a short distance from the magnet, and made to rotate in front of its faces. If the armature (as in Pixis or Clark's apparatus) be surrounded by a coil of wire, or if the magnet itself be so surrounded (as in the apparatus of Dujardin), and the free extremities of the wire be connected by a galvanoscope, or a live muscle of a frog, the needle of the galvanoscope is seen to deviate from the meridian, or the muscle to contract, when the armature is caused to rotate in front of the faces of the magnet. The contraction or deviation lasts but an instant, and returns to a state of rest. At the moment when the armature, in making a revolution, comes at right angles to the magnet, a new deviation of the needle in the opposite direction, or a fresh contraction of the muscle, as strong as the first, is observed.

These phenomena of induction are produced in the same manner by the magneto-electrical apparatus, as by the volta-electrical apparatus, that is to say, by a modification wrought in the state of the magnet or its armature, and in that of the upper wire coiled upon the armature or the magnet[a].

If the circle formed by the copper-wire is broken, at the same time that these modifications are produced, the inductive power is greatly augmented. Nearly all the magneto-electric machines are disposed in such a manner that the breaking of

[a] The following is the theory of the phenomena:—when the armature is placed in contact with the magnet, the natural electricity of the armature is decomposed by the magnet, and the opposite poles attract one another, and effect a recomposition. There results hence a neutralization of the artificial magnet, and a modification in the electricity of the copper-wire which is electrified by induction, the coils mutually increasing each other's action. When the armature is removed from the magnet by a revolution, the magnetic fluid of the magnet regains its liberty, and accumulates at each of its extremities; the electricity of the armature is recomposed, and that of the copper-wire suffers a new reduction.

the current is effected when the armature comes opposite the poles of the magnet. By a revolution of the armature they produce one feeble inductive action, which is inappreciable in man, and another, which is very strong. The first is produced when the armature is perpendicular to the magnet, the second, when it is in contact with it.

In the magneto-electric machines, the interruptions of the current are effected by means of a small spool (commutator), placed on the axis of the armature, which is put in motion by a special mechanism, composed of a small wheel with cogs working in a toothed wheel, so that the rotatory motion of the armature may be effected with great rapidity.

In conclusion, the preceding considerations show, not only that electricity by induction cannot produce a continuous current, since it is essentially intermittent, but that each intermission is composed of two currents in opposite directions. It is established, too, that the current produced at the end of each intermission, is the only one which exerts a physiological action on man, the first being so feeble, that, let the machine be ever so powerful, it is appreciable only in the muscle of a frog. As electricity by induction exercises on man only an intermittent physiological action, it can be resorted to without the danger of having a change in the direction of the currents, as in the galvanic apparatus.

The excitation of the skin by means of electricity by induction, let the operation be continued for ever so long a time, or let the current be ever so intense, produces no other organic action than the erection of the papillæ of the cuticular surface, or a little erythema.

In the present state of science, no difference, physiologically speaking, can be established between electricity transmitted to the body by the induced current of the first order, and that sent by the induced current of the second order. Nevertheless, the following facts prove incontestibly that each of them possesses special physiological properties. The electricity by in-

duction, produced by two superimposed wires (the current of the second order), excites the retina more powerfully than that proceeding from a single wire (the current of the first order), when this electricity is applied to the face or to the globe of the eye by means of moist exciters. This property of the current of the second order, of producing luminous sensations, is infinitely more highly developed in the magneto-electric than in the volta-electric apparatus. The current of the first order of the magneto-electric apparatus does not produce a stronger sensation of light than that of the volta-electric machine. The luminous sensation due to the action of the current of the second order of the magneto-electric machine, is far from being as strong as that excited by galvanism. The induced current of the first order, and the induced current of the second order, exercise an elective action, the first acting upon the muscular contractility, the second upon the cutaneous sensibility. The existence of this phenomenon can be established by the following experiment. Two volta-electric or magneto-electric machines are taken, the one furnishing a current of the first order, the other a current of the second order. They are graduated so as to act equally on the muscular contractility. If, then, the cutaneous sensibility be excited by both of them individually, the sensibility is observed to be weaker under the influence of the current of the first order than under that of the second.

The sensation which accompanies muscular contraction by means of electricity by induction, is less vivid than that caused by galvanism; doubtless, because the first exercises only an intermittent physiological action, whereas the second produces at each intermission three successive and rapid physiological effects.

c. Therapeutical deductions, drawn from the study of the preceding electro-physiological phenomena.

1. *Therapeutical Properties of Statical Electricity.*—The electro-positive bath, formerly employed as a general excitant of

the surface of the body, is now universally abandoned, its therapeutical being as powerless as its physiological action.

It is said, that this is not the case with the electro-negative bath, which is classed by the Italian school amongst its most valuable hyposthenic agents. According to Giacomini, a patient subjected to the electro-negative bath is *diselectrified*, deprived, consequently, of a greater or less quantity of stimulus analogous to caloric, and experiences a hyposthenic effect: an erysipelatous surface becomes instantaneously white, and chronic inflammations experience an incontestible amelioration. Cephalalgia and neuralgia have been instantly dissipated by this sort of *electric bleeding*, in a manner similar to that which occurs on the application of ice, which subtracts the caloric and perhaps, too, the electricity, at the same time. Such is the virtue attributed by the Italian school to the electro-negative bath.

This *electric bleeding* may flatter the imagination, but it is very much to be feared, that its hyposthenic effect is as hypothetical as the exciting property attributed to the electro-positive bath. Yet it would be unjust to condemn a therapeutical agent, only because it possesses no physiological action; above all, when it is supported by an authority so great as Giacomini. It yet remains to study, by further experiments, the real value of the electro-negative bath.

Electrization by sparks produces a cutaneous sensation, analogous to that of the smart application of a slight whip, and is chiefly applicable in cases where it is necessary to stimulate the skin slightly; but it becomes insufficient when we have need of a very vivid excitation, to obtain which it is necessary to have recourse to statical electricity of high tension, that is to say, to the Leyden jar, from which there results a muscular action and general commotion, in addition to the cutaneous excitation, and which sometimes contra-indicate its use. Thus, electrization by sparks is powerless in deep-seated and rebellious anæsthesia, and when it becomes necessary to produce instan-

taneously a revulsion like that resulting from the application of a hot iron to the skin.

Electrization by sparks, produced even by employing the most powerful machines and spherical exciters, causes only the contraction of the superficial muscles, or those which are very excitable, such as the platysma myoides, the upper half of the sterno-mastoid, the border of the trapezius, and some muscles of the face. In order that statical electricity may reach the muscles in general, it is necessary to employ the Leyden jar. But then, the excitement which results, and which may extend to the nervous centres, often renders the operation dangerous, if not impracticable.

A knowledge of the local organic phenomena produced by the discharge of the Leyden jar, enables us to appreciate the mode of its therapeutical action. We know that an organ subject to a discharge of the Leyden jar cannot arrive at the period of excitation without undergoing for some time the effects of stupor. It is easy, then, to conceive, that if the vitality of this organ be already considerably weakened, or if it be exposed to discharges too often repeated and too powerful, that this electric stupor may be indefinitely prolonged.

However favourable the conditions may be in which electrization by means of the Leyden jar is practised, it is always imprudent to expose the patient to more than eight or ten discharges. It follows, that it is impossible to electrify all the muscles when an entire limb, or more than one of the limbs, is paralysed.

In fine, this operation is always painful, for the cutaneous excitation, inseparable from statical electricity, increases in proportion as the electrical tension increases.

Muscular excitation by means of statical electricity ought in general, in my opinion, to be excluded from practice, for the important reason, that it can be replaced by another electrical agent, which excites the muscular contractility more

energetically and more efficaciously, without offering any one of its inconveniences.

Yet it is incontestible, that certain cures, marvellous, so to speak, are due to statical electricity, which has been from time to time in use in medical practice. These results only prove that certain cases of paralysis are always cured under the influence of electricity, in whatever manner, and under whatever form it is administered. Unfortunately, the rapid cures were so rare, that electricity administered in this manner could not stand the test of time, and was often abandoned altogether by physicians, after having excited for a time a sort of infatuation.

2. *Therapeutical Properties of Dynamic Electricity.*—The action of dynamic electricity can, as I have established, be limited to the skin, to a single muscle, to the nerves, or to the bones; or may be made to influence most of the organs which are situated far from the surface of the body. Owing to its special properties, the physician can now produce electrical excitation on diseased parts, without at the same time acting on healthy organs.

As electricity by contact and electricity by induction, which have been confounded under the name of dynamic electricity, enjoy essentially different properties, it is necessary to study separately the therapeutical action of each.

a. Electricity by Contact (*Galvanism*). — Galvanic excitation, which is limited to the skin, and which may produce there, besides a very vivid sensation, an organic action yet more considerable, whether erythema, vesication, or the formation of an eschar, answers to certain special indications. It is applicable, for example, in cases where it is necessary to obtain at the same time an instantaneous revulsion, and a lasting action, analogous to that produced by the moxa, or by cauterization with a hot iron.

Matteucci, deriving therapeutical deductions from his vivi-

sections, advised the use of the continuous current in tetanus, as it exercised a hyposthenic influence on the nervous system. It is, he says, natural to think that the passage of a continuous electrical current through a limb affected with tetanus, destroys this condition by producing paralysis[a]. Unfortunately, the theory of this distinguished physiologist rests only on vivisections, and I have proved that, in a healthy man, the hyposthenic action of the continuous current is far from being demonstrated. Experiment has yet to show what its action is when applied therapeutically.

The chemical properties of electricity by contact may be advantageously applied to therapeutics. We know what advantage surgery derives from the coagulating action of galvanism on the blood, in the treatment of aneurism. Becquerel thinks, moreover, that this chemical action might be employed in surgical cases as a modifying agent. He expresses himself as follows on this subject:

"Electricity, acting as a chemical force, has as yet been very little employed, although there is reason to believe that its action, under certain circumstances, would be very energetic. It has been remarked, that inflammation, followed by suppuration, is generally produced in parts where the exciters are applied. These effects may be attributed either to the excitation resulting from the circulation of the current, or to the decomposing action of the current; for, on the positive side, acids are deposited, and on the negative, alkalis, which must re-act on organic matter with an energy proportioned to the corrosive nature of the elements transported; nevertheless, advantage may be taken of the re-action produced by this means, to alter the nature of sores, as is done by cauterization. If we have to do with an obstinate ulcer secreting alkaline matter, in order to change its nature it is necessary to apply the positive electrode, so as to render it electro-positive, and cause the acid

[a] Treatise on the Electro-physiological Phenomena of Animals.

elements to flow to it. If this condition be maintained a sufficiently long time, we succeed in making the sore secrete matter, altogether different from that secreted in the pathological state; it is possible, in this way, to restore the part to its normal condition"[a].

This pretended therapeutical virtue of the chemical action of galvanic currents is, as yet, mere theory. Nevertheless, Dr. Crusel, of St. Petersburgh, has announced to the Academy of Medicine of Paris, that he has applied galvanism, with success, to the destruction of cancers. Are these results due to an organic modification, caused by the electro-chemical action of the galvanic current, or to an action of combustion, a purely physical phenomenon ? This is a question in therapeutics yet to be studied.

The property which galvanism possesses of exciting vividly the retina, may be made use of in the treatment of amaurosis. In consequence of this special property, galvanic electricity ought to be applied with circumspection to the face. The flash produced by it is so dazzling, that the sight might be injured if the operation were too long, the intermissions of the current too rapid, and the current too intense. The following is an example of the danger of this application. A patient, affected with paralysis of the face, had undergone a great many operations with an electro-dynamic machine (a volta-electric apparatus), and with a rapid current, without experiencing sensations of light. It is true, I never placed the exciters on the infra-orbital nor the frontal nerves, for fear of provoking neuralgia. I operated on him, one day, with an apparatus of moderate power, for five minutes only. The exciters, placed on any point whatever of the face, and on certain points of the head, produced flashes so dazzling and so rapid, that, to use his own expression, the apartment seemed to be on fire.

[a] Treatise on Physics, considered in its Relation to Chemistry and the Natural Sciences, by M. Becquerel, vol. ii. p. 637.

After the operation there was loss of sight on the side operated on, which lasted for some minutes. It is to this accident that I owe the discovery of the special action of galvanism on the retina; and it was by it that I was led to make researches upon the different properties of the several sources of electricity, as regards the production of flashes. I think I am justified in concluding, that the application of galvanism to the face ought to be proscribed, except in cases where it is necessary to act on the retina; and even then the application must be made with circumspection.

Muscular galvanization ought not to be practised except with an intermittent current. Most cases of paralysis of motion, above all those in which the muscular nutrition and sensibility are altered, require the use of a very powerful battery. In these cases it is necessary to employ a battery of 100 or 120 piles of Bunsen, in order to develope a force equal to that which I obtain with the apparatus evolving electricity by induction, which I use. Moreover, with my apparatus I avoid the danger of the calorification and powerful excitation of the organs which results from the use of galvanism. Besides, the various forms of galvanic apparatus (the batteries of Bunsen, Cruickshank, Wollaston, &c.) are applied with difficulty in practice, on account of their size, the use of acids which they require, and the gases they set free.

b.—Electricity by Induction (faradism).—Electricity by induction is the only therapeutical agent that can produce instantaneously the most acute cutaneous sensation, which ceases immediately with the operation, and which can be graduated from a simple tickling to the most intense pain, passing through all the intermediate degrees, or passing at once from one extreme to the other, without ever disorganizing the skin, and without leaving any trace on its surface, other than a slight redness, or small elevations due to the erection of the papillæ. It is easy to conceive that such an agent may answer to a great many indications, whether we

wish to excite the sensibility, as in anæsthesia, or to produce a revulsion merely upon any point of the skin, as in neuralgia, or rheumatic pains, &c. This cutaneous excitation can be frequently repeated, and applied to all parts of the surface of the body, even to the face, for it leaves no visible trace behind, and is suited to the degree of excitability of each individual, and of each region of the body.

The chemical action of electricity by induction is so feeble, that it cannot be used to coagulate the blood in the treatment of aneurism. The current of the second order of the electro-dynamic apparatus, whose special action on the retina is very analogous to that of galvanism, should not, as I have already said, be applied to the face, except in cases where we wish to excite the retina, for fear of injuring the sight of the patient. The currents of the volta-electric apparatus, and the current of the first order of the magneto-electric apparatus, as they excite the retina but feebly, are perhaps insufficient in the treatment of amaurosis. But on this very account it seems to me that they ought to be preferred in electrical operations practised on the face or on the cranium.

The elective action of the current of the second order on the sensibility of the skin, can be taken advantage of when it is necessary to produce an instantaneous cutaneous revulsion, for example, in deep-seated and obstinate anæsthesia, and that without leaving any visible trace after the operation.

Electricity by induction is the most suitable for muscular excitation, in the treatment of paralysis of motion, in chorea, &c.

It can be applied to produce muscular contraction, without causing pain, and without any fear of exciting the patient too much, however powerful the charge may be, provided the intermissions of the current be tolerably long. It is often necessary, as I have already said, to use a very intense current in the treatment of certain muscular affections. In these cases, electricity by induction is the only kind applicable, because it exercises no calorific action, as galvanism does.

In fine, the apparatus evolving electricity by induction can, in a small volume, act with considerable power on the muscular contractility, a circumstance which facilitates very much its application.

It results from the preceding considerations, that each of the sources of electricity, whose physiological and therapeutical properties I have just described, answers to special indications; it becomes necessary, then, to introduce terms, expressing their difference, and indicating their application.

The term electrization ought not to be employed except in a general manner.

The application of statical electricity may be properly called statical electrization, and that of electricity by contact may preserve the name of galvanization. But under the last denomination, electricity by contact and that by induction have, up to the present time, been confounded in medical practice. It is easy, from the considerations I have set forth, to understand the injurious consequences of such confusion.

Since it is necessary to invent a term which may designate exactly electricity by induction, or its application, is it not permitted to derive it from the name of the philosopher who discovered this kind of electricity? Thus, Galvani left his name to electricity by contact; and with equal justice, in my opinion, the name of Faraday may be bestowed on electricity by induction. Consequently, I propose that this electricity be called *Faradism*, and its application, *Faradization*. This denomination seems to me the happier, inasmuch as it establishes a distinction between electricity by induction, and electricity by contact, at the same time that it consecrates the name of Faraday, to whom medicine owes a discovery in therapeutics much more valuable than that of Galvani.

Art. IX.—*Observations on the Latent Period of Scarlatina; with Illustrative Cases.* By William D. Moore, A. B., M. B. T. C. D.

In no branch of science is an extensive observation of facts more necessary to the deduction of general principles than in medicine. The disturbing causes of the phenomena of disease are so numerous and varied, so much depends upon the climate, the state of the atmosphere, the peculiarity of constitution, the habits and rank of life of the patient, that more caution, probably, is necessary in drawing conclusions in medicine, than in any other department of human art. So much too, depends upon the truth or falsity of the inferences arrived at,—a correct or mistaken view of the nature of disease, the employment of suitable or improper treatment, involving the happiness and well-being, and often even the lives of our fellow-men,—that the grounds on which conclusions are based in medicine should be as general as possible.

That there is not one among the numerous diseases that affect the human race, to the study of which these observations apply with more force, than to that of scarlatina, will at once be evident if we consider the great variety of forms it assumes, a variety so remarkable as to have caused some of its phases to have been long regarded as distinct diseases, and occasionally to have led many distinguished men to consider it as a trifling affection, requiring little or no treatment, while others believed it to be a devastating pestilence.

It is the conviction that every one who has opportunity of observing disease, may contribute something, however trifling, to the general stock of facts from which conclusions are to be drawn, that induces me to place on record the following reports of cases which afford, I think, good examples of some of the forms assumed by scarlatina during its course, and of some of the consequences by which it may be followed. I shall, however, preface them with a few observations which I have

made in reference to the latent period of the disease, and to its communication by contagion.

1. *Period of Latency.*—Much difference of opinion seems to exist as to the length of time which may intervene between exposure to the contagion and the appearance of the disease. Thus, Dr. Gregory says it is "short, not exceeding five days at the farthest"[a]; Dr. Williams, that it "probably varies from a few hours to about ten days"[b]; while Dr. Tweedie states that, "in some rare cases five or six weeks have intervened between the period of exposure and the accession of the disease"[c]. But I do not find any cases brought forward to illustrate the duration of this stage, with the exception of one by M. Rostan, in which the disease was produced by inoculation, and in which seven days elapsed before the appearance of the eruption[d]. Much difficulty exists in fixing the latent period of a disease, and it can only be ascertained by noting and comparing a great number of cases, in which peculiar circumstances may have rendered its duration known. Generally speaking, persons who are exposed to the contagion of scarlatina, continue so exposed for several days, a circumstance which will, of course, render it impossible to say on what particular day the disease has been communicated. Again, clothes, furniture, &c., retain the contagion for a long time, a fact which throws additional difficulty in the way. It is more than probable that, in the instances alluded to by Dr. Tweedie, where five or six weeks had intervened betwen the supposed period of exposure and the accession of the disease, contact with infected clothes or furniture had taken place without the knowledge of the patient.

[a] Elements of the Theory and Practice of Medicine. London: Fourth Edition, 1835, p. 158.

[b] Elements of Medicine. London: 1836. Vol. i. on Morbid Poisons, p. 120.

[c] Cyclopœdia of Practical Medicine. Art. Scarlatina.

[d] Clinique Médicale, tom. ii. p. 206, quoted by Dr. Williams and by Dr. Copland.

In three or four cases I have been able to note with tolerable certainty the duration of this stage of incubation; and as the point is one of interest, and may often be of practical importance, I shall offer no apology for placing them on record. It will be seen that, in the four first cases which I shall mention, the latent period very nearly coincides with that of M. Rostan's case of inoculation.

Case I.—Mrs. G. paid a visit, in November, 1839, at the house of her sister, Mrs. F., where scarlatina had existed for six or seven weeks, five of the children and two servants having had it; the last of the children had been well for more than a fortnight, and one of the servants was, at the time, in scarlatina in the upper part of the house. Mrs. G. paid her visit in the drawing-room on Saturday, and was seized with scarlatina on the Friday following.

Case II.—Mentioned to me by Dr. Johnson. A young lady visited, on Sunday, a cabin in which a person was lying ill of scarlatina; the eruption appeared on her on the following Friday[a].

In the next instance, the latent period was, as in that of Mrs. G., about seven days, reckoning to the appearance of the eruption; and the disease was communicated by contact, nineteen days after the disappearance of the eruption from the person communicating it.

Cases III and IV.—On Sunday, October 8, 1848, I was called to see J. W., Esq., aged about 20. I found him in bed, with sore throat, fever, &c.; the eruption of scarlatina was coming out over his body; he had it well marked, but favour-

[a] Dr. Heberden remarks on this subject, that "the fever has begun to show itself on the fifth day after the infection was, most probably, taken by those who, being perfectly well before, have been brought to the house where some children were ill of it; and, perhaps, the space of time intervening between the infection and sickening may here, as well as in the small-pox, be generally nearly the same."—*Commentaries on the History and Cure of Diseases*, by William Heberden, M.D. Second Edition. London: T. Payne, Mews-Gate. 1803. Page 22.

ably. On the 14th of October he sat up, the eruption having quite disappeared; his skin was still desquamating on the 1st of November.

On the 2nd of November, having previously taken warm baths, and observed due precaution as to having his clothes washed and aired, he left Dublin for his father's house in the county of Wexford. On arriving there, late on Thursday evening, the 2nd of November, he kissed his two sisters; they complained of sore throats on Tuesday the 7th; kept their beds on Wednesday, and on the morning of Thursday the 9th of November, the eruption of scarlatina was found to be out on one of them; the other, who had scarlatina before, had, on this occasion, the sore throat without the eruption.

In two of the following cases, Mrs. F. and Master Clement F., for the notes of which, drawn up by the mother of the children, I am indebted to Mr. Smyly, the dates of the exposure to the miasm are sufficiently evident. The case of Master Clement F. illustrates the possibility of the communication of the disease by contact with infected clothes, in a manner which might easily have been overlooked; and, as I have already remarked, might lead to an erroneous conclusion as to the duration of the latent period.

"Master T. F. was taken ill with scarlatina, March 23rd, 1845, when the other children were sent out of the house.

" 25th, Baby was taken ill and brought home.

" 27th, Master Mat sickened, and was bought home.

" Mrs. F. was conscious of having imbibed the infection from the infant, having felt a peculiar sense of disgust or qualm, which continued till the fourth day, when the fever manifested itself. On the 20th June, Clement (who had been kept separated from the rest until within a month or so before he took ill) sickened; he died on the 11th July. It was supposed that the infection was conveyed to him in a pinafore which was brought out to Seapoint, where he was staying, from a wardrobe which stood (unopened) in the room where

the sickness had been. This was put upon him on Sunday, and he took ill on Thursday; he was immediately removed into town. Miss L. F., an elder sister, took ill on the 25th, five days after her little brother sickened."

On Sunday, January 12, 1851, Edward Bates, aged 8, was attacked with vomiting and sore throat; his parents stated that he had previously been quite well. The eruption of scarlatina came out next day. The case was well marked, being attended with high fever, raving, and bright eruption continuing the usual time, with decided affection of the throat, and being followed by desquamation of the cuticle. On Friday, 17th, his sister, aged nine years, was attacked, in like manner, with sore throat and sickness of stomach; and on the following morning the eruption of scarlatina was well out over her body. In this case, however, continuance of exposure to the contagion renders it impossible to state the exact time at which the disease may have been received.

The conclusion to be drawn from the first four cases I have described, in which the date of exposure is, I think, evident, is, that the latent period appears to be about six or seven days. Should this prove to be its normal duration, and deviations from it to be exceptions dependent on predisposition, idiosyncracy, or the age of the patient, on the intensity of the miasmata or length of exposure to their influence,—a proportion would seem to exist between the duration of the latent period and the premonitory fever in scarlatina and measles; the duration of each being in the latter about double that which occurs in the former. The latent period of measles is, I believe, tolerably well ascertained to be about twelve days[a], while the premonitory fever lasts about four; and the duration of the

[a] In two children, exposed for a day to the contagion of chicken-pox, and then removed from it, the duration of the latent period was the same as that of measles, viz., twelve days. In a case which occurred in January, 1851, Master H. was attacked with chicken-pox: the eruption appeared on his sister, the only other child in the house, exactly twelve days later.

latter, in scarlatina, is generally considered to be two days[a]. In the cases I have noted, and in M. Rostan's, the latent period is reckoned to the appearance of the eruption; in the cases of Mrs. F. and Master Clement F., it is calculated to the commencement of the fever. Making allowance for this difference, the seven cases will nearly coincide as to the duration of the latent period; in the other three cases mentioned by Mr. Smyly, the date of exposure to contagion is evidently doubtful.

I have thought it well to consider the latent period to be that which intervenes between exposure to contagion and the appearance of the eruption, in preference to considering it to terminate on the accession of the premonitory fever; because the latter is sometimes, in mild cases, so slight as to escape observation during a part or the entire of its course, in consequence of which its duration becomes uncertain. Where its accession is well marked, as in the case of Miss B., which I shall presently detail, it will generally, I think, be found to precede the appearance of the eruption by about forty-eight hours[b].

To the seven cases above enumerated I might, probably, add the following case of a third attack of scarlatina, which has been related to me by the patient herself.

Mrs. K. was on a visit in the north of Ireland, when she heard that scarlatina had broken out at her house, in the county of Longford. She returned home on the evening of

[a] Dr. Gregory, describing the chief points of diagnosis between measles and scarlet fever, states that scarlet fever lies latent one week, measles two. They also, he observes, "differ in the periods of their eruptive fever: scarlet fever develops rash in twenty-four hours, measles in seventy-two hours, after the setting in of fever."—*Lectures on the Eruptive Fevers*, by George Gregory, M. D. London: Henry Renshaw. 1843. Page 142.

[b] Although the commencement of the fever in Miss B.'s case was well marked, the eruption was irregular, and probably, therefore, her case cannot fairly be quoted in reference to this particular point.

Tuesday, 1st January, 1850, but did not see her son who was ill until the next day. She had scarlatina with eruption and sore throat, when a child, and had scarlatina again with sore throat and without eruption, after one of her confinements. On the latter occasion she was attended by Drs. Creighton and Cheyne, neither of whom had any doubt as to the nature of the attack. On Saturday, 5th January, 1850, she felt some dryness of the throat; on Sunday 6th, she shivered and vomited; this ushered in an attack of scarlatina with sore throat and without eruption, which confined her to bed for a week.

This case is instructive, particularly when taken in connexion with that of the Misses W., already detailed, who were exposed to contagion at the same time; and in one of whom a first, and in the other a second attack of scarlatina occurred synchronously, and about forty-eight hours before the appearance of eruption in the primary case.

2. *Varying Susceptibility to Contagion.*—A fact connected with scarlatina, as well as other contagious affections, and which, although well known, I have not found mentioned in works on the disease, is, that a person may at one time be fully exposed to its contagion and escape it, and yet take it on some subsequent occasion. This varying susceptibility to contagion is well exemplified in the following cases.

Mrs. H. C., in December, 1834, attended closely and unremittingly her two daughters in scarlatina, one of whom had the disease in a malignant form. She did not take it on this occasion.

Nine years afterwards, in November, 1843, she attended two of her subsequently born children in scarlatina, one of whom, as before, had it in a malignant form. She took the disease, and had it severely.

Mr. Smyly mentioned a similar case to me. The Rev. Mr. C. attended his sister closely during an attack of scarlatina. He escaped the disease. In the following year he took

it in his ministrations on the poor, and died in consequence of hemorrhage from the mucous membrane of the nose and mouth.

The following is an example of this varying susceptibility with respect to measles. In a numerous family measles prevailed on several occasions, some years' interval occurring between each invasion. On the first all the children took the disease, with the exception of one son, who, although in the same bed with one of the affected children, escaped it. On the second occasion he again escaped it, as did also a subsequently born son. On the third the disease was brought home by the son who had twice resisted it, he having taken the infection while visiting the poor, and by him it was communicated to his brother, who had once before escaped it.

This circumstance is one of much importance in a practical point of view, and is equally true of typhus and other contagious diseases; a knowledge of it should prevent those who have before escaped contagion from building too much on supposed immunity, and unnecessarily exposing themselves.

3. *Possibility of checking the Spread of the Disease.*—On a second occasion the family of Mrs. H. C., to which I have before referred, consisted of eight children, two of whom had scarlatina before. Immediately on the occurrence of the two cases in 1843, all the children, except the two affected, were removed from the upper story of the house, and by keeping up as strict a *cordon sanitaire* as possible, the disease was prevented from spreading; one daughter, who slept in her mother's room, took it from her; the other three escaped altogether.

Dr. Williams doubts the possibility of checking the dissemination of scarlatina in public schools by isolating the cases, the spread of the miasmata being, he says, more extensive than in most other diseases. Dr. Gregory states, that when it invades a school, no precautions avail anything towards preventing the spread of the infection. On the other hand, it has been considered quite practicable to arrest it, provided due

precautions as to washing of hands and strict attention to perfect cleanliness, be observed by those who are obliged to communicate between the infected and the non-infected; and it has been recommended to make the attempt, in preference to dispersing the school, as the latter proceeding would, probably, convey the disease to the respective homes of those in whom the infection might be latent. The number of cases in a public school may render it more difficult to isolate the disease; but I have repeatedly seen this object accomplished in private houses.

At the same time it must be acknowledged, that the disease will, occasionally, not be communicated under circumstances apparently most favourable to its diffusion.

Having premised these few general observations, I shall now proceed to describe the cases I have alluded to. The first I shall report is one of malignant scarlatina, followed by disease of the petrous portion of the temporal bone with paralysis of the muscles of the face supplied by the portio dura, terminating in recovery.

November 12, 1843, I was sent for to see two little girls, daughters of Mrs. H. C. The younger, aged twenty-one months, had a very copious eruption of scarlatina all over the body, but there was not much affection of the throat; she passed through the disease favourably.

The case of the other, aged three years, assumed, from the commencement, a malignant type: she was placed under the care of Dr. Johnson, who attended her with me; she had very little of the rash, some purpuric spots about the neck, slight affection of the throat, and diarrhœa; the latter symptom readily yielded to treatment. In the afternoon she was placed in a warm bath, and James' powder was given in divided doses. The eruption came out very well in the bath, and continued bright red for half an hour, when it receded; the dark purpuric spots disappeared, and did not return.

November 13th. The rash is well out about the joints, where it is of a bright red colour; in other parts of the body it can be seen, as it were, through the skin, and presents a dusky appearance; the throat is not much affected, but there is some swelling of the tonsils.

14th. Some small white patches on the uvula and tonsils; pulse 140; eruption as on yesterday; bowels have not acted since the 12th.

15th. Bowels twice moved by aperient medicine that was given; pulse 160, weak; small doses of carbonate of ammonia every second hour were ordered and cold chicken-broth.

In the evening the uvula presented an œdematous appearance; there was an ichorous discharge from the nose, and much tenacious mucus in the mouth. In the course of the night the throat began to swell, and was next morning much enlarged at both sides. Two leeches were applied to the tumour at the right side, care being taken to stop the bleeding as soon as they fell off. In the afternoon the pulse was 160, weak; and there was a fetid smell from the mouth; she was now put on small doses of quina, with water acidulated with hydrochloric acid as her ordinary drink.

17th. Bore the leeching well; white sloughs had formed on the back of the throat, which were brushed with a solution of nitrate of silver; a blister was applied to the nape of the neck, and the bowels were opened by a turpentine enema.

The little patient had slept very much and heavily for the last two or three days; pulse 160, weak; feet much inclined to be cold. Two glasses of claret, diluted with water, were now given in the twenty-four hours; the heat of the feet and legs was maintained by enveloping them in warm poultices of linseed meal, and scalded bran was applied to the abdomen. These applications were continued during two or three successive nights, and were, apparently, attended with the best effects; from this time she gradually improved, and was moved to the country as soon as her state permitted.

Her convalescence progressed without much interruption; glandular swellings at the right side of the neck suppurated three or four times, and, on being opened, discharged large quantities of matter; but the child quickly attained a high degree of health and spirits. A discharge of matter from the right ear, often fetid and dark-coloured, sometimes purulent and less offensive, set in in the commencement of December, and continued slowly diminishing in quantity until February 16th, 1844, when the muscles on the same side of the face became paralysed; the angle of the mouth and outer angle of the eye of the opposite (left) side nearly meeting whenever the child laughed, spoke, or cried; the distortion was great, and much annoyance was occasioned by the watering of the eye of the affected side.

A blister was applied to the region of the right parietal bone, and the discharge was kept up for some time by means of Albespeyrre's paper; small doses of quina, and afterwards of James' powder were given; the child improved gradually, and on the 13th of March the paralysis was scarcely perceptible; her spirits were good; bowels regular. There was still some discharge from the ear, occasionally fetid and dark-coloured, but, on the whole, decreasing.

Two years subsequently (in March, 1846), she got a slight cold, accompanied by an occasional return, for a few hours, of the fetid discharge, without, however, any paralysis. She has been quite deaf in the affected ear since her illness, but hears acutely with the left.

May, 1851. She is at present in good health, no trace whatever exists of the paralytic affection, but the deafness continues.

I am aware that several cases of disease of the petrous portion of the temporal bone, with paralysis, occurring after scarlatina, are on record; but they have all, I believe, terminated fatally by the extension of the inflammation to the membranes of the brain.

In this case the combination of paralysis of the muscles supplied by the portio dura of the seventh nerve, with deafness and with fetid discharge from the ear, was sufficiently alarming. Paralysis of these muscles, without diminution of sensation, depending upon an affection of the portio dura alone, and not on an affection of both the seventh and fifth nerves, may be entirely without danger; "but there is another modification which requires to be watched with anxiety, namely, when the affection is accompanied by deafness, as this gives reason to believe that both portions of the seventh nerve are affected, and consequently to suspect an internal cause." "If there be any reason to suspect that the affection depends upon disease of the temporal bone, it may afterwards be attended with danger, from inflammatory action spreading inwards to the dura mater or brain"[a]. As Dr. Abercrombie quotes cases which would prove that the implication of the dura mater or brain may be the work of three or four years, it is satisfactory that the case I have just described has not been lost sight of.

The following case also was seen by Dr. Johnson. It presents a good example of the formidable hemorrhages from mucous surfaces, which occasionally take place during the course of, or after scarlatina.

Master J.W. D., aged twenty months, had been a remarkably fine and very healthy child. On 1st January, 1844, he was taken from Dublin to live at Rusky, in the county of Roscommon, in a damp situation and bad house. The village was so small that there was much difficulty in procuring a sufficient supply of wholesome provisions; his diet was, therefore, inferior to what he had previously been accustomed to; which circumstances may, to a certain extent, account for some of the peculiarities of his case.

[a] Pathological and Practical Researches on Diseases of the Brain and the Spinal Cord, by John Abercrombie, M. D. Third Edition. Edinburgh: John Carfrae and Son. 1836. Pp. 420, *et seq.*

On the 5th of March, the eruption of scarlatina came out well, but receded on the same day, from exposure to cold and damp. On the 7th he travelled in the stage-coach to Dublin, and in the evening I saw him; there was then little, if any trace of the eruption; the throat was red and rather swollen; in a day or two diarrhœa, followed by malignant symptoms, set in. On the 13th March, the diarrhœa, which had before lasted only thirty-six hours, returned, obliging us to leave off quina which he had been taking, and to use means to check the bowel-complaint.

March 15th. The diarrhœa has ceased, but the breath is most overpoweringly fetid, in fact, putrid; the quina and wine given in jelly were resumed, and the extreme fetor of the breath was removed. The child seemed to be getting on well until 19th March, when at 9½ P. M., he was seized with vomiting of blood, and during the night passed much blood by stool; he died at 7½ on the morning of the 20th.

Post mortem, eight hours after death.—Dr. Lees kindly examined the body. There was *superficial* ulceration of the upper part of larynx; lungs perfectly healthy; there was a little semi-digested blood in the stomach; some clotted blood in, and also some resembling currant-jelly, lining the duodenum and the upper part of the jejunum; but the ileum contained a considerable quantity. The large intestines, with the exception of the rectum, were literally filled with clotted and jelly-like blood.

The kidneys were very large, nearly the adult size, and presented on a section the appearance of incipient Bright's disease.

I will next narrate a case of glandular swelling in the neck after scarlatina, in which abscess and ulceration of the internal jugular vein, and consequent communication of the latter with the abscess, occurred, and were followed by hemorrhage, convulsions, and death.

On the 2nd January, 1850, I was suddenly called to see a boy in Harry-street, aged 4½ years. I found him bleeding copiously from a large tumour in the neck; his clothes and the bed on which he lay were fearfully drenched with blood; he presented a completely blanched appearance, and was very faint. The collapse induced by the sudden loss of so much blood had nearly arrested the hemorrhage before I arrived. From his mother I learned, that he had, until three weeks previously, enjoyed good health, and had been a remarkably fine, intelligent child; he was then attacked with scarlatina, for which he was treated at Pitt-street Dispensary. On the disappearance of the scarlatina, swellings took place at both sides of the neck; his mother did not call at the Dispensary, but placed him under the care of a nurse-tender, who poulticed the swellings. On the night of the 1st January, the tumour on the right side, which was much the larger, burst, and a copious discharge of purulent matter took place, followed by an oozing of blood, which continued for the entire of the next day. About 5 o'clock on the evening of the 2nd, a violent burst of hemorrhage occurred, and in half an hour afterwards I was sent for. The tumour was situated over the right jugular vein, and was as large as a hen's egg, livid and shining.

Having applied lint and pressure, I called on Dr. Battersby, who visited the child with me. Measures were taken to prevent a return of the hemorrhage; but it came on again in the course of the night, and was followed by convulsions and death, at 2 A. M., exactly twenty-four hours after the bursting of the abscess.

Dr. Battersby examined the body on the next day; he found the areolar substance in the neighbourhood of the tumour destroyed, the muscles dissected, and the internal jugular vein ulcerated, and communicating with the cavity of the abscess.

About the same time a death occurred in Dublin, in con-

sequence of the carotid artery having ulcerated into a similar abscess after scarlatina.

Mr. Liston published a case communicated by Professor Fergusson, of King's College, of a child, aged nine years, suffering from the sequelæ of scarlatina, in whom the lingual artery, near its origin from the external carotid, was opened by the ulcerative process. In this case the abscess had been opened early, and hemorrhage did not come on for some days; the hemorrhage returned on three several occasions; the last was followed by instantaneous death.

Dr. James S. Hughes read before the Surgical Society of Ireland, a case in which the external carotid artery opened into an abscess which had formed after scarlatina.

Dr. Henry Kennedy relates two cases, in which the internal jugular vein was the vessel which sloughed.

In Dr. De Bal's and Dr. King's cases, as quoted by Dr. Hughes, the internal jugular was the vessel which opened.

Dr. Hale relates a case of death from sloughing of the internal jugular vein after scarlatina, and consequent hemorrhage.

A case has lately been recorded in the Union Médicale, for August, 1850, by Dr. Deperet-Muret, of sloughing of the internal jugular vein after scarlatina, in a boy fourteen years of age which differs from all the foregoing, by terminating in perfect recovery.

So far as I have been able to ascertain, the hemorrhage has been in these cases more frequently venous than arterial, in the proportion of 7 to 3.

Dr. Graves has shown, that the great vessels will often resist ulceration, when all the surrounding tissues have sloughed away; and he gives a remarkable case in which this occurred, the patient recovering. But the possibility of these formidable hemorrhages taking place cannot be too deeply impressed on the mind of the practitioner, and will point to the necessity of warning the patient's friends before opening a tumour which

may present any suspicious appearances. The question whether an early opening might prevent the destruction of the vessel is also of great importance. The case I have detailed was, as has been seen, left to itself; but an examination of the cases on record will, I think, show that an early opening of the tumour does not tend to arrest the process of ulceration.

The next is a case in which recession of the eruption was followed by metastasis to the wrists, elbows, and shoulders.

Miss B., aged 18, of full habit of body, was attacked at 12 p. m. on Tuesday, 29th January, 1850, with shivering, vomiting, and diarrhœa. On being called to see her in the afternoon of the following day, I found her labouring under severe inflammation of the tonsils; and as the latter were constitutionally enlarged before this attack, the opening of the fauces was nearly closed by the inflammatory swelling. She had much difficulty in swallowing and speaking; pulse very rapid and weak; great external tenderness at the left side of the throat, less on the right side; tongue furred, red at the tip. Twelve leeches were applied; and on the 31st, Dr. Graves saw her with me, and continued in daily attendance during her illness. Her throat had been much relieved by the leeching; she could speak and swallow better. There was some ulceration of the left tonsil, and much lymph was thrown out on it, and on the upper part of the uvula.

February 1st. The eruption of scarlatina has come out vividly on the hands and feet, representing, as it were, gloves and socks; on the arms it is in small patches, bright red, and apparently elevated, the skin appearing to be very white between the patches; pulse still quick and weak; bowels free; frequent micturition.

2nd. Throat much better; eruption more out, but not generally over the body; there is scarcely any on the neck or chest. Visiting her in the evening, I found that it had declined, and that she complained of much pain and loss of

power in both wrists, especially in the left one; some tenderness on pressure.

3rd. The eruption has very much declined; the wrists are swollen, not painful to the touch, but the least motion of the affected joints produces exquisite pain. Pulse still quick; renal secretion abundant. Small doses of carbonate of ammonia with camphor mixture and syrup of poppies, were given at intervals of four hours. The legs were stuped with flannels wrung out of hot water, and sprinkled with compound camphor liniment. The affected joints were gently rubbed with mercurial ointment, mixed with a small portion of extract of belladonna.

4th. The wrists are not so painful, but the elbows and shoulders are slightly affected; no return of the eruption. Pulse has fallen to 104, and is of better character, being somewhat stronger; throat much better, less swollen, and the ulcerated spots have nearly healed. The tongue is very tender; the papillæ very red and distinct.

5th. Joints much better, less swollen, and less painful. Pulse 104; bowels have not acted since the 2nd.

6th. Joints well; slept refreshingly for many hours yesterday and last night; bowels acted twice naturally this morning; is tranquil, but languid. Pulse 96; complains of tenderness of tongue and mouth.

From this time Miss B. progressed favourably, and recovered without any pericarditic or dropsical affection. In a few months after her recovery she went to France, where she has since chiefly resided; and where she has, I understand, had the enlarged tonsils successfully excised. Thus, her case, though irregular, was not followed by any of those troublesome sequelæ which so frequently occur in cases where the eruption does not come fully and favourably out, a circumstance which is, no doubt, in a great measure to be attributed to the extreme care which was, by Dr. Graves' direction, taken to avoid exposure to cold and other sources of danger during her conva-

lescence, and which may at the same time be considered as bearing out his observation in reference to dropsy, viz., "that anasarca seldom occurs after severe and dangerous scarlatina, but is not unfrequent as a sequela of the very mildest forms of the disease"[a].

The pain of the joints was relieved by friction, a circumstance which has been several times observed by Dr. Watson in similar instances; and which he points out as helping to distinguish this articular affection from true rheumatism. Another distinctive feature of his cases was, "that although the patients were all children, the heart in no instance became implicated in connexion with the tumid joints." Dr. Scott Alison, however, he adds, has recently directed attention to pericarditis, as a complication and sequela of scarlatina. Dr. Watson is inclined to "ascribe the articular affection, and the cardiac affection, whether they occurred together or separately, to one and the same cause, namely, to the retention in the blood of a poisonous excrement, by the default of the principal emunctories, and especially of the kidney"[b].

Art. X.—*The Treatment of Varicocele*[c]. By James Morton, M. D., Fellow of the Faculty of Physicians and Surgeons of Glasgow.

The mechanical nature and action of the causes producing varicocele have been recognised by nearly all writers who have noticed the disease; and from this it may have arisen that most of the modes of treatment which have been proposed for this lesion consist in appliances or operations, whose effect has been too purely mechanical. No regard has been had to

[a] Clinical Medicine, edited by Neligan, vol. i. p. 352. Dublin: Fannin and Co. 1848.

[b] Lectures on the Principles and Practice of Physic, by Thomas Watson, M. D. Third Edition. Vol. ii. p. 818.

[c] Read before the Glasgow Medico-Chirurgical Society, June 10, 1851.

the vitality of the parts concerned; their *vis medicatrix naturæ* has been entirely neglected; the power inherent in the tissues of returning, when properly assisted, to a healthy condition, both in function and structure, has been completely overlooked, and no importance has been attached to the *permanent patency of natural canals.* Too many of the operations have been entirely obstructive of the spermatic venous canals, without any attempt to establish, or even to point out, a collateral circulation. The profession may well remember how dearly it paid for such neglect in the melancholy death of Delpech.

A prudent reliance upon the now established doctrine, that the circulation of a limb is often maintained by the collateral channels when the main supply is cut off, as by deligation of an artery, has been the parent of many operations which are an honour to surgery; but in recommending the adoption of such operations, in any case or class of cases, we ought to be able to indicate the probable course of such a supply, and the inosculating vessels through which it may take place. As a general rule, nothing but the most imperative necessity, or the certainty of the gravest consequences, should induce a surgeon to produce obstructive closure of any natural canal; and, moreover, the return of *effete* blood from any organ should not be prevented by operative procedure, unless there is the strongest probability, nay, almost certainty, that the blood will find its way to the heart by collateral channels. I scarcely require to affirm that this has often been lost sight of in the treatment of varicocele, and the result has been much to the opprobrium and regret of the practitioner, as well as to the vexation of the patient.

That cases of this affection are not by any means rare, a fact abundantly evidenced by the returns of the medical inspection of recruits for the army, as published, may form my excuse for bringing its treatment under the notice of the profession at this time.

For this lesion, then, there is at present but one mode of treat-

ment proposed, which seems entitled to careful attention; but, before referring to it particularly, I will glance at the palliative treatment, and merely enumerate the operations which have been proposed, and which are now almost completely laid aside.

Mr. Curling, whose valuable work on the Testis and its Diseases is now so well known, when describing the palliative treatment of varicocele, starts with the assertion, that "varicocele is almost an incurable disease;" but, from some facts detailed by himself in this very work, and the case detailed, and others alluded to in the paper published in 1848 by Dr. Thomson of Dalkeith; from inquiries which I have been led to make on this subject; and from experience of the first case, and certainly the only one, which I have treated, it is now my conviction that the period has passed away when such a reproach could justly be brought against modern surgery. The history of the case to be presently adduced is, however, a proof that the most approved method of treatment, and that entirely free from danger, has not yet sufficiently attracted the attention of even the leading members of the profession.

When considering the means of palliating this disease, it is necessary to keep constantly in view the anatomical peculiarities of the parts more immediately implicated, such as the origin and course of the arteries and veins, the direction of the excreting ducts, and the media of support to the organ or organs, in this instance the scrotum and cremaster muscle; and also the positions which the contiguous parts occupy in relation to these, and the mechanical or vital effect, if any, which they may exercise upon them. When the circulating system is the seat of disease, as in this lesion, the course of the vessels supplying the parts with blood, and also that of the venous return, which are usually nearly the same, demand most careful attention; and from a consideration of the course of the spermatic vessels, it is obvious that any circumstance which may tend to produce an accumulation of venous blood

in the right side of the heart and vena cava, would predispose to congestion, especially of those organs from which the blood has to return in opposition to the law of gravity; hence, everything which may cause or continue such accumulations ought to be avoided, or, if possible, removed. Everything which of itself causes determination of blood to the testes and scrotum should be shunned, such as warm baths, fatiguing exercise, much indulgence in venery, &c. Gentle aperients, or warm-water enemata, should be employed to obviate costiveness, which always aggravates the malady. A light, loose dress should be worn; the cold shower-bath may be used, as well as frequently dashing the parts with cold water; the cold plunge-bath proved very servicable as an adjuvant in the case about to be detailed; the parts should be supported by a suspensory bandage, in order to diminish the length of the vessels, and, consequently, the height and weight of the volume of blood circulating too slowly within them; the bandage should be formed of open silk net, so as not to heat the parts, and to admit of the use of an evaporating lotion at the same time.

Various plans have been proposed in order to make the scrotum itself serve the purpose of a suspensory bandage: such as Mr. Wormauld's, and the operations proposed by Sir A. Cooper and Dr. Lehman, a German surgeon, all fully described by Mr. Curling in the work already alluded to. Of the various operations proposed or performed upon the veins, I shall merely enumerate the following:—division of these vessels, by Sir B. Brodie; ligature of the same, performed by Sir E. Home and Delpech; M. Davat's plan, a sort of twisted suture; M. Vidal's plan of silver wires, twisted subcutaneously; the red-hot wires as used by Liston; M. Ricord's plan, a form of subcutaneous ligature; and a modification of this, proposed by Mr. Luke; excision of the veins, as practised by Petit and others; and, finally, Breschet's plan of obliterative compression by the forceps. All these (with the exception of the plans of M. Vidal and Mr. Liston, which are not noticed by him)

are characterized by Mr. Curling either as ineffectual in removing the disease, or as dangerous both to the integrity of the testicle and the life of the patient; producing atrophy of the former, and endangering the latter by hemorrhage, severe constitutional disturbance, phlebitis, and sloughing of the parts. In severity all these operations are altogether unjustifiable, more especially when we find that another mode of cure has been suggested, which is free from all the dangers above alluded to, is attended with little or no inconvenience in its application, and, when carefully and perseveringly applied, seems to be almost uniformly successful. In proof of this, cases have already been published, and to these I would take the liberty of adding the following.

On the 3rd of January, 1850, a gentleman about twenty-seven years of age, with whom I had been long and intimately acquainted, transmitted to me a note, the contents of which alarmed me not a little, indicating as they did a state of mind very similar to that which may be expected to terminate in suicide. No time was lost in repairing to his residence, and, though I had always considered him to be most exemplary in his general conduct, the hope was entertained that it might be nothing more serious than the effects of some youthful indiscretion, into which he might have been unguardedly betrayed.

On arrival, however, the cause of my friend's distraction was found to be severe varicocele of the left side, with the following history: When about fourteen years of age he received from a schoolfellow a very smart kick upon the scrotum, which was followed by severe pain and considerable swelling of the parts, lasting three or four days, and disappearing in a great measure without any treatment.

To use his own words, he always afterwards felt an enlargement and *knottiness* in the vessels of the part, with an occasional sense of uneasiness, or feeling of weakness. The parts continued in nearly the same condition until about four years ago,

when the knottiness seemed to increase, as well as the uneasiness or sense of dull pain, and the testicle of the left side became much more pendulous; the laxity of the scrotum increased, and the gland itself became much less sensitive to pressure and softer than its fellow, while in size it was considerably diminished, indicating the progress of gradual atrophy.

This state of matters led him to consult successively four practitioners of the highest standing in this city. The first encouraged him to expect a spontaneous cure, and recommended local cold bathing, and a suspensory bandage. While using these means, but with little or no benefit, he consulted the second, who discouraged him very much, by at once flatly telling him that it might get worse, but would never be better. The third proposed taking a cast of the parts, so as to include the whole scrotum in a firm case to support all the parts, but did not seem to have much confidence in his own plan, and left it untried. The fourth, being asked to consult with the first, could suggest nothing additional. They all agreed in discountenancing every form of operative procedure, for which the patient was urgent, as he was now ready to submit to anything, despairing of relief, and in a state of distraction more easily imagined than described; for there are no diseases which take such a powerful hold upon the mind as diseases of the organs of generation. The spermatic veins of the right side, and even the scrotal veins, were more distended with blood than usual, and the patient could hardly be convinced that the right testicle was not gradually becoming less in size, and the veins rapidly increasing in fulness and tortuosity.

After examining the parts, I suggested the use of a lever-spring truss. My attention had been drawn to this mode of treatment by a paper published in the Monthly Journal of Medical Science for November, 1848, by Dr. L. Thomson, of Dalkeith. Having, however, had no experience in the use of such an instrument for the cure of varicocele, I suggested to my pa-

tient to lose no time in consulting Professor Syme of Edinburgh; and at his request I accompanied him to Edinburgh on the 5th, to obtain the advice of that gentleman.

After examining the patient, Mr. Syme at once alluded to the lever-spring truss, as worthy of a trial; but expressed himself as very doubtful of its efficiency, and said, that he feared "the remedy was worse than the disease," which he seemed to regard as not a very serious matter, so long as one testicle was comparatively sound. He gave a decided veto to all thoughts of operative interference.

By a very singular coincidence, Mr. Syme had arranged to meet that same day with Dr. Thomson of Dalkeith, the author of the paper which had attracted my attention, and I was invited to join them at the Infirmary. After the visit, Dr. Thomson very kindly showed me the mode of applying the lever-spring truss. I at once fitted a similar instrument on my patient, and its immediate effect was such as to inspire him with hope and confidence in at least the palliative powers of the remedy. When applied after the patient had been in the recumbent posture and the tortuous veins had emptied themselves, the power which it seemed to possess in preventing their refilling and distention, was to me a matter of surprise, and, I must confess, rather unexpected. On the 9th of January, he first commenced to wear it regularly, but as I was not with him when the truss which had been specially made for him arrived, my patient, being afraid to lose any time, applied it himself as well as he could, and when I saw him two days afterwards, there was a little irritation and swelling of the cutaneous tissues over the pubis and rather below than upon the external ring, where the truss ought to be worn. The impression on his mind seemed to be, that the nearer it could be worn to the tortuous and enlarged veins, the better.

The instrument being properly adjusted, all pain and swelling speedily disappeared, the parts became accustomed to the pressure of the pad, and the veins gradually diminished in

size and apparent tortuosity. Notwithstanding the progressive improvement in the condition of the veins, and the assiduous application of cold lotions to the part, the scrotum continued very lax and pendulous on the left side, generally hanging an inch and a half, or even two inches, lower than the testicle; so much was this the case, that at one time I was considering the propriety of having recourse to some operative procedure, such as Sir A. Cooper's operation, or that of Breschet or Lehman, when it occurred to me that the cold plunge-bath would prove a more efficient bracing agent than the mere local application of a cold lotion, and, besides, I was desirous of testing the contractile powers of the scrotum a little further.

About two months, then, after the first application of the truss, the patient commenced the use of the cold plunge-bath every day, or every second day, as he had opportunity, and by the end of two months more the parts had much improved. It may here be remarked, that the local cold bathing had little effect upon the contractile powers of the scrotum, and that little was very transient, only lasting a few minutes, while the cold plunge-bath produced much greater contraction, which did not entirely disappear for at first two, and afterwards three or four hours after the bath. Under this treatment the improvement of the parts, and, of course, of the patient's feelings, has been all that could be wished, so much so, that he has since married. He still wears the truss.

In the month of September, 1850, I wrote to Dr. Thomson, informing him of the result of this case, and requesting that he would favour me with a detail of his experience in such cases, subsequently to the publication of the paper already referred to. In reply he wrote as follows:

"You ask me to favour you with some remarks on my further experience of the pressure plan of cure since I published on the subject. At present I am unable to give you any detailed statement, but I may mention that, after further trials, I continue, with very slight alterations, to entertain the

favourable opinions I then expressed. I have received seven or eight letters, similar to your own, from parties at a distance, who have spoken in the same glowing terms of the relief that has been afforded them by the use of the instrument I recommend. I am only able to lay my hand upon three of these documents at the present moment. The writer of one of them, a perfect martyr to the depressing effects of varicocele, was led to apply to me by the merest accident; namely, by seeing some allusion to my paper in one of the half-yearly Medical Abstracts which he happened to take up, to amuse himself, in his medical attendant's house. He applied to me in June, 1849, when the varicocele, which he thought had been caused by a '*crush*,' had been of four years' standing. He writes:

"'19*th September*, 1849.

"'Dear Sir,—I now address you for the purpose of informing you of the effect the application of your truss has had in my case. This, I am glad to say, is all that could be wished, all that the most sanguine expectation could desire. The parts are gradually assuming a natural, healthy feel and appearance, and I think that, by the time you specified (nine or ten months), a complete cure will be produced.' [Here he goes on to say that he experienced great inconvenience and pain from the first employment of the instrument, but that, when he wrote, he had neither one nor the other.] . . .

"'I need only add, that the improvement in spirits is quite as remarkable and as gratifying as the improvement in body.

"'Yours respectfully,

"'R. Y. G.'

"Not having heard of this case since the receipt of the above I take it for granted that it is cured. I could expect this all the more from taking into consideration the accidental origin of the disease, the age (about 30, I should think), and naturally robust constitution of the patient.

"With the exception of one case, I am not sure whether the

truss has altogether been discontinued in any, for, as soon as complete relief is experienced, I hear nothing more from my patients. This is partly owing to my own negligence in correspondence, but more, perhaps, owing to the reluctance patients have in giving up the use of that which has been of so much service to them. For some time after discontinuing the use of the truss there is felt the want of its *support*, which, in those who have to undergo much muscular exertion, is apt to make them take to it again, though in reality not requiring it. I find, however, that even in a young subject, considerably longer than nine or ten months may be necessary to produce a radical cure. Of this the following letter affords an illustration:

"'*Edinburgh*, 11*th June*, 1850.

"'Dear Sir,— . . I am glad to say that I am progressing towards complete recovery; the enlarged veins, however, make their appearance now and then, and, although it is now about sixteen months since I began to wear your truss, I find I cannot dispense with it altogether yet. I have no doubt I will be able to dispense with it by-and-by. . . . . .

"'I am yours, &c.

"'M. M.'

"The writer of this letter suffered much from a large varicocele of the left side, and had been first under the care of an able surgeon, and then under a distinguished physician, in Edinburgh, without any benefit. When he applied to me he was much emaciated in body, despondent in mind, and suffered much from spermatorrhœa, as also from pain and dragging sensations of the affected parts. I saw him fitted with a truss; ordered him rhubarb pills to keep the bowels regular; a grain of quina three times a day, and to bathe the testicle and groin with cold water every morning. Not many weeks after, I had a visit from this young gentleman, quite renovated in health, so much so that, until he gave me some account of him-

self, I was unable to recognise him as my patient. From the extent of the disease, as well as from a naturally relaxed habit of body, I do not expect a cure here sooner than in two or three years. This case reminds me of an important fact, that patients suffering from spermatorrhœa, in whom the veins of the left testicle are generally larger than usual, are likely to be cured by the application of a slight spring truss. At least, I have found it so in two cases, when the spermatorrhœa was one of the most troublesome symptoms.

"From my experience I consider that a permanent cure is not often to be expected in a shorter time than twelve months; that in some cases, in which there is likely to be much exertion, when the affection is of long standing, and when there is a naturally lax habit of body, even though the parties be not advanced in life, a certain amount of pressure may always be necessary to prevent reproduction of the disease. This is to be expected, more particularly if the veins in the inguinal canal have been long and much affected. It will be found, however, that the relief afforded in the last class of cases will be the most certain and speedy. In slight distention of the veins of the testicle only, the benefits of *pressure* are not so convincing to the patient, because they are longer in being manifested. The *inguinal canal cases* are the most satisfactory to treat. Though I have not treated any old person, it may be pretty confidently stated, from what Mr. Curling has written, and from what I have elsewhere mentioned, that such will never be able to dispense with the use of the truss.

"I cannot too strongly urge the absolute necessity of great attention being paid to the fitting of the truss. It is generally necessary to begin with very moderate pressure. In some cases it may be right to recommend a milder instrument at first than may afterwards be found equal to effecting a permanent cure. It is best, before the parts become accustomed to pressure, before there is tolerance of the remedy, to trust most to the thigh-strap attached to the end of the lever spring, which can

be increased or diminished at will. When pressure, however, can be maintained with impunity, it is far more agreeable to the patient, and far more efficient to have it exerted more by the circular than by the lever-spring.

"As nothing ought to be beneath our notice which can add to the comfort of our patients, I may add, that the thigh-strap, which ought to be stuffed with the finest wadding, and covered with chamois leather where it rests on the thigh, should consist, for at least three inches behind, of elastic strapping. This prevents the strap from starting off the nail on the lever-spring, and adds much to the comfort of the wearer by yielding to every movement of the body, and in this way keeping up still more equable pressure." . . . . .

It must be admitted that the proposal of applying a truss in cases of varicocele is opposed to our preconceived notions; taught as we have been, in works on hernia, carefully to distinguish between protrusion of the bowel and dilatation of the spermatic veins; and, on no account, to think of applying a truss to the latter class of cases; such a procedure being calculated to result only in a mischievous aggravation of the disease. But against these notions we have here the stern verdict of experience, and we are constrained to look around for some principle by which to explain the *modus operandi* of the agent we employ.

It is by a process of analogical reasoning that we have arrived at a knowledge of this method of treatment, for the history of which, and an account of the principle upon which it is founded, I must refer to the work of Mr. Curling[a]. The merit of suggesting the application of pressure to varicocele seems to belong to the late Mr. Aston Key. The object of it may be stated to be the maintenance, while the patient is in the upright position, of pressure upon the spermatic veins, to such a degree as may be sufficient to relieve them from the superin-

[a] Page 469, *et seq.*

cumbent weight of the blood, without endangering the integrity of the testis by obstructing the spermatic artery, or becoming unbearable by the patient. This pressure must be continued for a time sufficient to allow the coats of the veins to return to their natural dimensions, or nearly so, and until they acquire strength to carry on the circulation. It may be supposed, that the valves incompetent for the dilated canal may become adequate to the discharge of their healthy functions when the caliber of the vein is diminished by compression. In one of the cases mentioned by Dr. Thomson, the commencement of the malady is referred to a crush; my patient referred his to a kick; it is possible, then, nay, it is probable, that the determination of the blood to the parts, consequent upon the injury inflicted, may have caused some dilatation of the canals of return, sufficient in amount to render the valves unequal to their duty; which circumstance would not only perpetuate the dilatation, but would allow the weight of the column of blood in these vessels to operate continually as a means of gradually increasing the evil.

As the treatment of varicocele by pressure brings us into direct contact with the instructions usually given for effecting a diagnosis between this morbid state and a hernial lesion, it may be necessary to refer to these directions, or rather to those circumstances which are really worthy of reliance. They are not numerous, as only four points seem deserving of careful attention and some degree of trust, individually, while collectively they may serve to establish our diagnosis. These are, first, the history of the case, not always obtainable from an intelligent source; second, the peculiar feel of the scrotum, compared, as it has been in varicocele, to a bag of earth-worms, as differing from the smoothly rounded swelling of a hernial protrusion; third, the sensation communicated by pinching up the parts at the ring, and rubbing them between the finger and thumb; and, fourth, the mode of return of the swelling when completely reduced, whether from above, as in hernia, or from

below, as in varicocele. It is now known that moderately firm pressure prevents the return of both. That any well-educated surgeon, after a careful examination, can mistake the one malady for the other, is hardly conceivable; but should they occur together in any case, the hernial protrusion being small, it is possible that the latter may be overlooked by the surgeon, the mass of enlarged veins attracting all his attention, and at once deciding his diagnosis. Should this, however, be accompanied by strangulation and the symptoms usual in such a case, the surgeon will then be led to look deeper for the cause of the more urgent symptoms. To those who are interested on this point I would recommend a perusal of Dr. Thomson's paper, already cited, more especially as the case detailed by him, and the remarks which follow it, bear particularly on the mode of diagnosing between these two morbid states.

As might have been predicted, some have been afraid to employ the truss, through a fear of rendering matters worse, but Mr. Curling has stated, that among all the cases of hernia which he has seen, in which a truss has been worn for a length of time, he has not met with one, and cannot recollect one complicated by varicocele[a]. It may be that the one lesion acts as a prophylactic to the other, even where a truss has not been worn, by each so filling up the inguinal opening as to prevent the descent of the bowel in the one case, and the dilatation of the veins in the other. However this may be, it cannot be denied that the author of the above statement has enjoyed large opportunities of seeing and examining such cases.

The objections to this mode of treatment are few, if indeed there are any worthy of attention. Mr. Curling lays much

[a] Dr. Thomson mentions having seen cases of reducible hernia complicated with varicocele, in which the ordinary attendants had avoided the application of a truss, on account of the complication, fearing an aggravation of the latter disease; and, in such, he had recourse to an instrument fitted with a pad a little longer than usual, so as to press at the same time upon both the external and internal inguinal opening.

stress on the pain and inconvenience caused by the instrument, and instances two cases in which the patient had been obliged to discontinue the wearing of the truss; and Professor Syme also stated that he thought the remedy worse than the disease.

In the cases treated by Dr. Thomson, we find that very little is said of the annoyance or suffering produced by the instrument; in none of them has it been severe, or even protracted, and it was exceedingly trifling in the case under my charge, and did not last longer than two or three days; so that I am disposed to regard this objection as deserving of little consideration, and referable, in all probability, to the imperfection or unfitness of the instruments employed in the cases which have been adduced.

Again, it has been said, that the pressure must be so firm as to be intolerable; but it may be safely affirmed, that a degree of pressure which becomes unbearable must be greater than is required for the object we have in view; and, laying the question of toleration of the instrument aside, it ought to be discontinued, because it may endanger the integrity of the testis, the preservation of which is one of the desiderata, and the chief merit of this mode of treatment. It is indeed very probable that a truss with a very powerful *circular spring* might operate as powerfully in producing rapid atrophy of the testis, as any of the *obstructive* operative measures which have been already named, a result not unfrequently observed in hernial patients, where a very strong truss has been long worn over the external abdominal ring. The truss should be so constructed that the degree of pressure can be regulated by the surgeon or by the patient himself; and such is the nature of the instruments used in the preceding cases, and here recommended. It may also be laid down as a general rule, that a degree of pressure, firm enough to prove effective as a curative agent, will not be difficult to bear. Should we meet with exceptions to this, it has been recommended, that such patients should at first wear an instru-

ment of less power, to be followed by a more powerful one, when it can be borne[a].

All modes of operative interference hitherto proposed have been utterly discountenanced by the highest living authorities in surgery, so that we are confined to this remedy or to none: either to abandon these cases as incurable, or try some such method of relief. The advantages of the treatment by pressure are numerous; such as, an avoidance of confinement to bed, house, or even absence from business, and consequent concealment, for few patients so affected will be desirous of making their malady known to any except their medical attendant; there is no danger to life; no wound is inflicted, hence no risk of inflammation of veins, of sloughing, of hemorrhage, or any other of the occasional dangers inseparable from cutting operations, among which erysipelas is not the least formidable. The wearing of the truss is also quite compatible with the continued use of all the usual palliative measures, with the addition of the cold plunge-bath, which ought not to be neglected.

The time during which it is necessary to wear the truss has been stated to range from nine to fifteen months, and some cases may require a longer period; but time is of little consequence, since the patient is not confined to the house, or in any way prevented from attending to business.

Doubtless, cases of disease do occur, so complicated that all remedies are found to fail, and there may also be cases of varicocele so complicated with other forms of disease, that the application of a truss may either be inadmissible or inadequate to effect a cure; and, while it is improper to draw inferences from

[a] The Moc-main lever, or Evans' patent truss, is recommended by Mr. Curling. It has only a lever, no circular spring, and may be used in slight cases, or in severe ones at the commencement, to accustom the parts to some degree of pressure. Dr. Thomson recommends this truss in slight and recent cases of varicocele, but for others he has used an instrument having both a circular and lever spring, which is, certainly, to be preferred where a greater degree of pressure is required, as in old and severe cases.

such a limited number of cases as I have been able to collect, upon which to pin our faith dogmatically; still, I may be allowed to give it as my decided opinion, that the treatment by pressure is the only course we ought to adopt; that a trial of it should be recommended in every complicated case; that it is free from danger; not difficult to bear; and will be found sufficient for the cure of almost all cases of varicocele.

Art. XI.—*Observations on the Causes, Nature, and Treatment of Hong Kong Fever.* By George Kingston Barton, Member of the Royal College of Surgeons of England, Member of the Royal Asiatic Society of China, &c. &c.

Having had an opportunity of observing, in the years 1844 and 1845, many of the cases of fever which prevailed amongst the inhabitants of the island of Hong Kong, and during the past year, while in medical charge of a portion of the sick in H. M. 59th regimental hospital, having had ample means of observing and treating the disease, which has proved so fatal to Europeans residing upon the island, and more particularly to Her Majesty's troops quartered there,—I have drawn up the following remarks, which are based upon actual experience, and a faithful record of facts.

The fevers endemic in this colony are distinctly periodic, and should be classed as intermittents and remittents, nearly all the fatal cases belonging to the latter type. A case of simple idiopathic continued fever has never come under my notice here. The remittent type in some instances passed into the continued, after the fourth or fifth day, there ceasing to be any marked remissions after that period, but idiopathic continued fever, if ever occurring, is very rare at Hong Kong. The intermittents are, with few exceptions, quotidian, these exceptions assuming the tertian form. In the remittents, the type is well marked, one paroxysm occurring in twenty-four hours;

in some few instances it reduplicates, two paroxysms being experienced in the same period.

As the disease noticed in this paper has been of late years almost entirely confined to the troops stationed on the island, the following remarks bear especial reference to its peculiarities as observed amongst them.

Causes.—It is a generally received opinion that marsh miasmata give rise to periodic fevers, and, while holding the same opinion myself, I think it well worthy of inquiry, whether they may not be caused by climate and atmospherical vicissitudes, and not dependent on terrestrial emanations solely. It is not altogether improbable that periodic fever may arise independently of malaria, and be owing to heat or peculiarity of climate remotely, and, immediately, to sudden chills or any depressing agency developing that particular form of fever. Some facts observed here would tend strongly to confirm this doctrine, while others militate against it. Before proceeding further, a short account of the island of Hong Kong is requisite, that the reader may judge for himself.

The island of Hong Kong is situated in 22° north latitude, 114° east longitude; its largest diameter is nine miles; seen from a distance, it is precipitous and uninviting; its high hills often terminate in sharp peaks, the highest, called Victoria Peak, is about 1800 feet above the level of the sea. From the summit to the water's edge, there are few or no trees, and, except in the summer months, when the island looks green, it might be supposed to be quite barren. In shape it is very irregular, and from the precipitous form of the hills, independent of inherent sterility, it affords little scope for agricultural industry. The northern aspect of the island is very steep, and intersected by deep ravines.

The city of Victoria is situated on the northern shore, and stands close to the base of the highest ridge, the buildings extending up the face of the hill, in the form of an amphitheatre,

and overlooking each other. The town enjoys the advantage of being built upon a dry soil, on an elevated ridge, and is now well drained; but, passing to the eastward, the military barracks are built at the foot of a ravine or mountain gorge, and the 59th regimental hospital at the foot of another, so that, if malaria be generated from the rank vegetation or decayed vegetable matter carried down by the torrent, these buildings are placed within its baleful influence, the wind during the hot season blowing through these ravines towards the military buildings.

The thermometer in summer seldom exceeds 88°, but sometimes reaches 91°; the average summer heat is about 84° to 86°. A frost in Victoria is an especial curiosity, and snow has not yet been seen there. The dryest months of the year are December, January, and February; in March heavy rains are generally experienced, of which there is a partial cessation in the following month, but the rainy seasons are very uncertain and irregular; usually the heavy falls commence in May, and continue at intervals until the middle of September, but June, July, and August, may be considered the rainy season. In the winter months the thermometer is seldom lower than 53°; with a continuation of northerly winds, it sometimes falls during the night to 45°, but remains so for a few hours only.

The most prevalent diseases are intermittent and remittent fevers, and dysentery.

The principal causes of sickness are those incidental to tropical climates, producing exhausting effects upon the nervous system of Europeans, and rendering the body more than ordinarily susceptible of disease.

It has been alleged that the cause of the endemic is some exhalation from recently turned-up soil, and it is worthy of remark, that shortly before the late fatal epidemic amongst the troops, as well as in 1848, and former years, the soil was disturbed near the barracks to a considerable extent; in all

instances the work being commenced and carried on during the hot season, at the very period sickness might be apprehended.

Whatever the cause or causes of the fever may be, one fact is incontestibly established, that the vicinity of ravines and gorges in the mountains is unhealthy, the bad cases of fever observed for some years past in the colony occurring in such situations or in exposed positions. Both the Murray barracks and hospital are built at the foot of ravines, and the inmates will, in my opinion, always be obnoxious to attacks of fever. The frequent relapses of fever in the hospital wards; the circumstance of men admitted for other diseases being attacked, and dying of fever; and the quick return of so many discharged cured, with all their former symptoms aggravated, is worthy of serious consideration. The sick orderlies or attendants were not frequently attacked with fever; but when dismissed from the hospital for any ill-conduct, and sent to take their turn of duty in the barracks, they soon returned, suffering from fever, and with health much deteriorated, a striking example of the bad effects of night-watching. I ascertained from observation that relapses were most frequent in the eastern wards of the hospital, which were opposite a cutting in the hill leading from the ravine behind.

It may not be out of place to mention, that the site of the former barracks at West Point, is close to a spot abounding with surface-springs. The artillery hill has never been a healthy site, and it is notorious that the inmates of the ordnance buildings erected thereon have all been attacked with fever. The hospital being nearer the water might be supposed to be sufficiently far removed from any malign influence derived from the ravine in its rere, but experience proves directly the contrary.

The first cases on record of Hong Kong fever are those termed West Point fever, and the following extracts from Dr.

Wilson's Medical Notes on China allude to the years 1842–3, since which time the same disease has devastated Her Majesty's troops at intervals.

"Fever with flux first appeared in force this year, as well as the last, in a locality called West Point. The barracks occupy a narrow ridge, running from south to north, and terminating at the beach; right and left of this ridge, being in the course of the summer breezes, are hollow and shelving spaces, with deserted rice-plats, resulting in marsh naturally swampy, hollow spots, and decomposing brushwood, which ascend close to the barrack buildings. Last year the 26th regiment, while quartered in these barracks, suffered severely from fever and flux, and this season a wing of the 55th regiment has been rendered almost entirely unserviceable by the same form of disease. Its exact proportionate loss in a given time is not at present known to the writer; but he believes he may aver, that at least one-half of the whole force has been or ultimately will be lost by death and invaliding. Some weeks ago the mortality became so appalling, and the sickness so universal, that the quarter was abandoned, at least for the season; the remainder of the troops being embarked in ships at anchor in the bay.

"East of the town, and close to it, there are swampy ravines, one of which all but touches the ordnance barracks, where there has been a great amount of disease, death, and invaliding."

Speaking of the Happy Valley, which has since been cleared and levelled, Dr. Wilson remarks: "Europeans who resided on some of the neighbouring slopes and heights suffered severely during this season, and the resulting mortality, in relation to the number of residents, has been excessively high; one spot, and that which was best tested, proved fatal in an extraordinary degree. It is a low, narrow gorge, where a line of six cottages were lately built, with high land on either side, and close to one extremity of the range there is cultivated

rice ground, while there are deserted spaces at the other. From the height of the land forming the gorge, the wind is diverted from its natural course, follows the hollow, and thus blows over the rice land, cultivated or waste, to the cottages. Last season five English gentlemen went to reside there; in a short time four of the number died from fever, the fifth scarcely escaped with life, and the lodging, not without reason certainly, has been abandoned. A detachment of the 98th regiment, quartered on an adjacent height, has also suffered severely, the mortality within the last six months amounting to 25 per cent.

"Early in the hot season, while fever and flux were ravaging the localities east and west of the town, persons resident in it remained comparatively healthy; and it is to be noted, that there is scarce any swampy soil in the town, or nearer than the places indicated above. Later in the season, however, diseases of the same character, but with less violence, invaded the citizens; and it is especially worthy of record, that those inhabiting the most central part of the town, and farthest removed from the miasmatal spaces flanking it east and west, suffered the least. About the same time that the town was affected, disease also appeared in the ships anchored in the bay, of the same general character, and evidently of the same origin, but somewhat modified, flux bearing a greater proportion to fever; and though often singularly intractable and dangerous, not on the whole endowed with so much fatal force as on shore."

All the localities indicated by Dr. Wilson as known to be unhealthy in 1844, remain so to the present time, viz.: the range of houses built behind East Point (long since abandoned); the Happy Valley, or Vale of Death, in which three large and commodious private residences were erected, of which two have been razed to the ground by their proprietors as uninhabitable, owing to their insalubrity. The Morrison Hill and Seamen's Hospital, also Artillery Hill, have always been fever localities, and continue so, while the city of Victoria

enjoys almost entire immunity from fever, and the few cases that do occur are of a mild and tractable nature. The Government House, erected for Sir H. Pottinger, has been long since given over to the troops as a barrack, and the Albany range of buildings, erected for the accommodation of Government clerks, was abandoned some years back to the native troops, the Europeans who lived there having suffered severely from remittent fever.

The fever so fatal in the summer of 1843, cut off 100 from a total of 300 civilians residing upon the island. At that time there were but few houses erected, and those few damp, and consequently insalubrious. Some were imperfectly roofed, and insufficient to exclude the sun's rays. The market was at that time badly supplied, and did not afford the variety of food it now does.

In the years 1844 and 1845 numerous fatal cases of fever occurred amongst the Chinese stone-cutters employed in hewing granite on the face of the hill.

The 42nd Madras Native Infantry in the years 1846 and 1847 lost a large proportion of their number from fever and dysentery. They were quartered in mat-sheds, with floors a little raised from the ground, and situated on the hill behind the site of the Murray barracks. When these troops were subsequently removed into better quarters, the sickness abated.

Troops in India are usually encamped on the ground, the soil being dry. The soil in this country being, on the contrary, moist, quartering them in a similar way led to disastrous results.

The overseers of roads, men much exposed to the sun, in many instances died of fever and dysentery.

Since the year 1844, the comparative healthiness of the civil community, in contrast with the unhealthiness of the military, has been observed and commented upon, and the former having, under unfavourable circumstances, suffered from the same diseases, and those circumstances being changed or al-

tered, enjoyed good health, proves that the continued mortality amongst the troops is owing to removable causes, and not to be ascribed entirely to climate or locality.

One remarkable circumstance in connexion with the subject is, the mild character of disease occurring in those persons living afloat, the Royal Navy losing but a small proportion, and their fever cases being of a mild nature; and in merchant-vessels in the harbour, remittents or intermittents are very rare, a febrile attack, lasting two or three days, being that most frequently complained of, and caused usually by exposure to the sun and intemperance while on shore. Diarrhœa and dysentery are the most prevalent complaints afloat.

At the time there were so many bad cases of fever in the military hospital, a Norwegian vessel was moored for a short period near the Happy Valley, and lay exposed to the currents of air passing over it. The consequence was, that two of those on board were attacked with remittent fever, and one with acute hepatitis. These men were attacked within a few days of each other, and after the ship moved away from the influence of the noxious wind into the open harbour, no more cases of sickness occured on board.

I have been informed by Dr. Pottinger, the surgeon of H. M. S. Reynard, that the most healthy period experienced on board, during that ship's stay in China, was in the months of July and August, when she lay within half a mile of the barracks where such fearful mortality prevailed! Several cases of fever of a low typhoid type occurred on board H. M. S. Serpent, lying at a greater distance, but I believe none proved fatal.

In enumerating the remote causes of the fever endemic in Hong Kong, the diminished powers of life in the European exposed to tropical heat should first be mentioned. The energy of the vital endowment being weakened, the tendency to organic lesion is increased.

That the proximate cause can, in many instances, to a cer-

tain extent, be traced to the individual, is evident from the fact, that the officers of the 59th regiment, quartered in the same locality as the men, but better provided, having more space allotted to their use, and not being exposed at night, escaped fever; as well as from the circumstance, that the youngest men in the regiment were subject to the most frequent relapses, entailing ultimately extensive visceral disease, while the older men, and especially those who had been acclimated in the West Indies, were not attacked with fever until October or November, when the disease assumed a mild intermittent type. The state of vital manifestation, generally, must have much influence in either inducing or resisting the disease; and whatever lowers the energies of the frame should be guarded against, more especially want of sleep, and a spare diet; generous living, on the contrary, being requisite.

Dress should be attended to, and regulated according to the temperature, for while too little clothing may predispose to disease, appropriate garments have much influence in the preservation of health.

The high temperature prevailing night and day for a space of four or five months, must have an injurious effect upon the human frame, which, together with the humidity and electrical conditions of the atmosphere, undoubtedly predisposes to disease. A very moist or humid state of the atmosphere exists in summer here, and renders the powers of life more languid, and the system consequently more open to the invasion of disease. A warm and humid atmosphere dissolves and accumulates the specific causes, such as animal and vegetable effluvia, assists their operation, and favours a rapid transfer of electricity from the earth's surface, and the change in the condition and the accumulation of it in the air resulting therefrom.

That the moon has some influence, I have no doubt; and the table of admissions, relapses, and deaths, in my possession, tends to confirm this opinion.

That a poison is imbibed into the system through the pul-

monary apparatus, would appear from the constriction and load upon the chest so much complained of, and the sudden prostration of strength. The suppression of perspiration is a frequent exciting cause, as instanced by the number attacked on or after night-guards, from exposure to draughts of air at open windows, and the frequent relapses of those patients unavoidably placed near the doors in the hospital wards.

It is interesting to know that the native Chinese are subject to periodic fevers: many of such have come under my notice, accompanied likewise by enlarged liver and spleen. It is worthy of note also, that they invariably select sheltered situations for their detached houses and villages, both being surrounded by umbrageous trees and shrubs.

That malaria depresses vital power, contaminates the circulating and the secreted fluids, and weakens the vital affinity or cohesion of the soft solids, is shown by its more immediate, as well as by its consecutive effects upon the living body, and by the fact of dead animal matter running faster into putrefaction in situations where it abounds. Its septic operation on sores and wounds is often evinced during life. It has been repeatedly proved that substances fabricated of silk, woollen, and even of cotton and flax, exposed to marsh exhalations, very rapidly undergo decay, silk and woollen becoming putrid, and cotton and linen assuming a dingy or yellow hue, and afterwards losing their cohesion. These effects are rapid and complete, in proportion to the moisture and warmth of the air, and the concentration of malaria in it, and so well are they known, that they are generally recognised by the more intelligent inhabitants of Italy and the south of France as indications of the insalubrity of particular places and seasons[a].

Now in Hong Kong, sleeping on the ground-floor is known to be unhealthy. The natives themselves usually have the floors of their houses made of a mixture of lime and clay, perfectly smooth and hard, but always have trestles or sleeping-places, raised

[a] Copland.

several feet from the ground. Bungalows, or one-storied dwellings, usually have their wooden floors decayed and completely rotten in two or three years, and require new flooring much sooner than the more lofty buildings; and I have been informed that the records kept on the basement story of the government offices, which stand close to the Murray barracks, crumble to pieces; that wine, beer, and other fluids, if kept on the ground in China, soon spoil, is well known. All these facts tend to confirm the theory of a noxious emanation from the soil.

On the other hand, let us consider whether the fever endemic in this place arises from causes independent of terrestrial emanations, and solely dependent on peculiarity of climate developed by accidental or occasional circumstances.

Almost every medical man will approach the subject with preconceived notions as to the influence of malaria, but Dr. Graves of Dublin, a high authority, has stated his opinion that the typhus fever endemic in Ireland, and which is usually considered to have a local origin, depends chiefly on atmospheric influence.

One fact which is strongly in favour of this hypothesis, is the unhealthy character of Stanley or Chukchoo, a military station at the south side of the island of Hong Kong. The barracks there are close to the water, and open to the sea-breeze.

The south-west monsoon blowing during the summer months, and the town of Victoria being situated on the north side of the island, and under the lee of the highest range of mountains, it was conceived that the exclusion of the refreshing sea-breezes was one cause of sickness. A military station was accordingly formed at the south side, and barracks erected upon a peninsula open to both monsoons, and enjoying the advantage of having no swamp or marsh in its neighbourhood. The mortality there exceeded the worst periods experienced at Victoria, on the northern shore, and the place has been virtually abandoned. Many of the worst cases of visceral disease

in the 59th hospital came from Stanley; and six assistant-surgeons, ordered there during the past season to replace each other in succession, were all attacked with fever and removed to Victoria. Five have been sent home invalided, having suffered from numerous relapses of fever and visceral congestions.

A detachment of sappers arrived here from England in October last; some were quartered in Victoria, others at Stanley, but all were attacked with fever within a fortnight after their arrival, and at a time when malaria could not be considered as exerting much influence.

The same cause, whatever it may be, evidently gives rise indifferently to remittent fever, acute dysentery, or intermittent fever. Where sanious discharges from the bowels take place during a paroxysm of fever, they ought merely to be viewed as a translation of the disease from the skin to the intestinal mucous membrane.

Although the intermittents prevailing in the midst of winter can only be considered as relapses following previous attacks of fever, and were there any malaria now evolved, the wind, blowing from a different quarter, would but carry it to a greater distance, yet the fever takes its usual course, the visceral congestion and engorgement increasing with each succeeding paroxysm, so regularly indeed, that, on examining the state of the liver and spleen through the abdominal parietes, a consideration of their size will indicate the number of days the patient has been suffering, without the formality of inquiring. How important is it, then, that means should be taken, after the first paroxysm, to check it, a neglect of which has in the summer months entailed the loss of so many lives, and in the cold months produced irreparable organic lesion, and in some cases a fatal result.

The uniform periodic type, to the exclusion of the continued form of fever, not only in Hong Kong but other tropical regions, is another argument against miasmatic origin, and would seem to show that vicissitudes of temperature, and other

causes which in a temperate climate give rise to continued fever or inflammations of the thoracic viscera, in a tropical climate cause periodic fever, or determinations to the abdominal viscera.

That the disease cannot be attributable to locality alone is proved by the immunity enjoyed by the officers, and by those men not exposed on guard to the night air; the latter were sometimes the subjects of fever, but not so frequently as those exposed at night.

That drunkenness is not a cause I am satisfied.

Did it depend upon the malaria alone, how is the fact that the greatest mortality occurred in the first ten days in August, so limited a period, to be accounted for; or the medical attendants and sick orderlies being attacked; or those near the door suffering such frequent relapses? All the civil practitioners called in to attend upon the troops were attacked with fever of a similar type to the men; one died who had complained of languor, &c., for some days; but, at the outset of his attack, an eruption distinctly variolous appeared, attended with delirium and despondency: he died in three days.

That a poison is imbibed into the system, remaining latent for an uncertain period, or until some exciting cause develops a febrile paroxysm, is evident; and that the system is impregnated with this subtle essence is shown by the constant liability to relapse, which, probably, is more likely to occur at stated periods, such as the full and change of the moon. Whether the poison is malaria or generated in the atmosphere, or merely formed within the body through the effects of climate, it is not easy to determine.

That the human frame, when placed in unfavourable circumstances, or debilitated, or suffering from nervous depression, is more liable to invasion; and when favourably circumstanced is more capable of resisting the disease is manifest: but this is no more than holds good in all climates.

Exposure to night air on guard, to chills on parade, to uni-

form clothing without reference to temperature, to the foul air in crowded rooms gradually sapping and undermining the health, and, perhaps, to a deficient or innutritious diet;—all these, combined and acting together, would be quite sufficient to account for the disease which has occurred, although each acted only in a moderate degree.

The mortality attained its maximum between the 4th and 10th of August; the type after that period became milder and more amenable to treatment; but a great many of the deaths must be ascribed to the disinclination the soldiers had to enter the hospital until the most favourable time for medical treatment had passed never to return; and much might yet be done in saving life, and preserving from organic disease, by the timely administration of prophylactic doses of quina or bark.

That an attack of periodic fever may originate from other causes than malaria I am convinced from my own case. I resided for more than four years in Hong Kong without suffering from any febrile symptoms; yet in one month after I had been in attendance upon the troops I was attacked with remittent fever, the immediate cause, doubtless, being unusual mental and bodily fatigue, and perhaps the foul air inspired in the crowded wards of the hospital, both being powerfully depressing agents.

The following considerations certainly point to malaria as the source of the fever:—The civil population having at one time suffered equally with the troops, but subsequently, on proper sanatory steps having been adopted, remaining comparatively healthy, for a period now extending to seven years; and the mild character of the disease in the Royal Navy, and persons living afloat. This latter circumstance is less striking than the former, as the temperature is much lower on the water than on shore.

The nature of the disease will next be considered.

The fever endemic in this colony during the hot season is

distinctly remittent in type, the exacerbations and remissions being well marked. That the organic nervous system is primarily affected is evident from the train of symptoms observed from the outset of the disease, as well as from the effects of different modes of treatment.

At the first invasion of the disease the breathing is laborious or hurried, the circulation is languid, irregular, &c.,—the blood leaving the extremities and surface of the body, and determining to central organs, spleen, liver, and brain. The pulse frequently feels as if the arteries were but partially filled, the coats, having lost their tone or vital resiliency, have not the power of accommodating the caliber of the vessel to its diminished contents. When re-action is produced by the exhibition of stimulants, and the nervous system brought under the specific influence of quina, the pulse regains its fulness, and tone is imparted to the blood-vessels. The secretions and excretions are impeded, interrupted, or altered, and the animal temperature diminished. All these symptoms evince depression of the organic nervous system.

The disease, as far as I have had an opportunity of observing, presents three varieties, viz., the inflammatory, the bilious, and the adynamic; the two latter were most predominant amongst the troops, but several instances of the former came under treatment.

In some cases the usual precursory symptoms were experienced for a day or two, such as lassitude, uneasiness at the epigastrium, pains in the head, back, and limbs; but the attack was most frequently ushered in by chills or slight shivering, quickly followed by intense heat of skin, nausea, thirst, &c., but many had no chills, the paroxysm commencing with increased heat of skin, nausea, and headach.

The symptoms usually present on admission were, great prostration of strength, loss of appetite, intense heat of skin, thirst, headach, pain in the back and limbs, laborious or hurried breathing, pulse 100 to 120, tongue loaded or with erect

papillæ, urine scanty and high-coloured, tenderness on pressure in one or both hypochondriac regions,—the spleen being enlarged and easily felt in the majority of cases, the liver in some; but, when there was much tenderness in either or both hypochondria, vomiting was usually an attendant symptom, yet it seldom persisted after the hot stage. In some few cases the eyes were suffused, and the head much engaged, delirium being present during the paroxysm. Great dilatation of the pupils was observed in nearly all the cases, attributable, apparently, to diminished sensibility of the retina—which, doubtless, partakes in the general depression of the nervous energy—and not to any pressure upon the brain. The bowels were generally slow in the month of August, but subsequently profuse watery diarrhœa was frequent, and many of the cases were either complicated with dysentery or followed by that disease in its acute form.

The duration of the hot stage was usually about six or eight hours in the early paroxysms; but if the patient was without treatment, or the congestion of the internal organs not relieved, the paroxysms went on for sixteen, eighteen, or even twenty-four hours, when they frequently proved fatal. The exacerbations usually commenced in the forenoon.

After the termination of the hot and commencement of the sweating stages, the skin soon becomes cool, the pulse diminishes in frequency, and the other symptoms abate.

The remittent fever endemic in this colony, like that observed in other tropical regions, runs a rapid course, the fourth or fifth diurnal paroxysm being most frequently fatal. This may not appear from the hospital records, but can be shown even from them, if it be taken into account that many of the fatal cases only entered its precincts on the second or third day of their illness, thus placing it beyond the power of their medical attendant to rescue them from inevitable death, and casting an undeserved odium upon the healing art; as this disease, with many others, while amenable to treatment and readily

curable at the outset, soon ceases to be within the reach of any known remedial measures. Many cases doubtless pass the fifth, and die on the tenth or eleventh day, the fever either assuming the continued form, a perfect remission not taking place after the fourth or fifth day; or the disease becomes *masked*, the pulse ranging about 100, with a peculiar thrill, heat of skin slightly above the natural standard, hurried manner, the patient rising suddenly and getting out of bed without apparent motive, total absence of sleep.

These cases die suddenly, convulsed; *post mortem* examination exhibiting effusion at the base of the brain.

In the inflammatory form of the disease there is high vascular excitement, tending to cerebral congestion or effusion.

In the bilious there is much disorder of the liver, varying in each particular case,—congestion, inflammation, enlargement or induration; and, in two instances, jaundice appeared on the fourth day after admission.

In the adynamic variety, which was frequently observed amongst the troops, the depressed condition of the vital powers was extreme, and powerful stimuli were required to bring about re-action. Pain in the forehead, extreme pallor of countenance, apathetic indifference, lassitude, pain in the back and limbs, hemorrhage from the nose, vomiting of blood, or sanious discharges from the bowels, oozing of blood from the gums, were often present, but did not indicate increased danger. Total suppression of urine for two or three days, sordes on the teeth and lips, and, in one example, well-marked typhoid symptoms, the remissions being indistinct after the first few days, occurred.

The stools were in some cases dark and very offensive, sometimes resembling coffee-grounds, and when dysentery was complicated with, or followed the disease, the evacuations presented all the varieties peculiar to that disease.

Yellowness of the skin frequently followed; some were not to be distinguished from the native Chinese colour. After two or three attacks of the disease, particularly when early and

energetic treatment was not employed, or taken advantage of, disorders of debility ensued: cachexia, œdema, anasarca, and effusion into the serous sacs,—pleura, peritoneum, pericardium.

Several cases died a few hours after admission into hospital, but, as far as I could learn, they invariably had febrile paroxysms on the two, three, or more previous days.

Death seemed, as far as my observation went, to be caused either by effusion at the base of the brain, pressing upon the medulla oblongata and producing convulsions, well exemplified in the convulsive paroxysms occurring suddenly on the tenth or eleventh day, when, in half an hour after the patient would to all appearance be progressing towards convalescence, a fatal result would ensue; or from the powers of life gradually sinking under a protracted paroxysm; or, thirdly, from the vital powers being unable to develop the disease, sudden sinking, without re-action, having taken place.

In two such examples, one expressed himself as perfectly well, and was disinclined to take medicine. The other thought that nothing could save him, and refused to take anything. Both died in a few hours.

In the cold weather, bronchial affections, pneumonia, diarrhœa, dysentery, and rheumatism, were constant complications or sequelæ.

Many of the cases set down as remittent fever on admission had undoubtedly been simple intermittents at their commencement, but the disease, from being suffered to proceed unrestrainedly, had passed into the more complicated form, the visceral congestion being aggravated.

That cerebral effusion may take place with unusual rapidity is probable, from the impaired condition of the frame generally, and consequent diminished resistance or resiliency in the vessels to meet the increased arterial action in the hot stage, giving rise to engorgement of the abdominal viscera and effusion upon the brain.

That the nervous system is chiefly implicated, is evident

from the short period elapsing between the commencement of a paroxysm and a fatal issue, a period frequently not exceeding half an hour; the phenomena noted being, hurried breathing, anxious countenance, increased heat of skin, convulsions, pulse increasing quickly from 90 to 150, and getting weaker; and, after death, the presence of effusion at the base of the brain.

The treatment found most efficacious consisted, during the paroxysm, in hot fomentations to the abdomen, followed by a large sinapism, when there were vomiting and abdominal tenderness ; a five to ten grain dose of calomel, combined with James' powder and opium, followed by diaphoretics, with appropriate medicines to regulate the bowels: if slow, a purgative of jalap or castor oil; if watery diarrhœa was present, opium, which seldom failed in checking it. When headach or vertigo was much complained of, a blister to the occiput and nape of the neck. In a few cases, where cerebral congestion or effusion was apprehended, mercury was pushed to ptyalism, and leeches were applied to the temples (cupping the back of the neck would be preferable in some cases), but seldom exceeding six at one time, and being careful not to allow the bites to continue bleeding, as alarming sinking was observed to follow the application of so few as six leeches.

In those cases where the pulse was fluttering and unequal in its beat, brandy, with the æther mixture, was found singularly beneficial, producing sleep, and inducing diaphoresis.

Emetics were never prescribed, and local bleeding practised with due caution, general bleeding never. Emetics are contra-indicated in this disease, as nausea or vomiting only interferes with the administration of the requisite medicines during the remission ; and should the opportunity be lost, a fresh paroxysm quickly follows, and terminates probably in death.

A *remission* having taken place, evidenced by free diaphoresis, pulse falling to 80 or 90, skin becoming cool, no morbid heat in the axillæ or abdomen, quina was administered,

commencing as early as possible after the termination of the hot stage, in six-grain doses every second hour, up to thirty or thirty-six grains, or, in urgent cases (where the preceding paroxysm was protracted, or from delay on the patient's part in seeking admission into hospital, a short interval could only elapse before another might be expected), six grains every hour. When no great amount of visceral congestion was present, the quina was given in solution; when there was much congestion, in combination with blue pill and James' powder; if any bowel affection, combined with opium.

It has been stated by writers that the too early and free use of bark or of quina, in periodic fevers, before secretions have been evacuated and congestions of the liver removed, has often induced serious inflammations and structural change in the liver. This may be true elsewhere, but certainly not in Hong Kong, as the most effective mode of relieving the hepatic congestion is by exhibiting large doses of quina, combined with mercury and opium, taking care to evacuate the bowels, if slow. As the congestion and engorgement of the viscera is increased with each succeeding paroxysm, the most obvious step is to check its periodic recurrence without delay, and attend to the other means of lessening the tendency to disorganization.

It was usually found advantageous to give brandy or wine during the administration of the quina, with alternate doses of the diaphoretic mixture, composed of camphor mixture, sweet spirits of nitre, aromatic spirit of ammonia, and tincture of hyoscyamus. The good effects of brandy and æther were repeatedly manifested in steadying the pulse, producing diaphoresis and refreshing sleep, and, in the remission, aiding the medicinal action of the quina by supporting or sustaining the energy of the nervous system, so enfeebled and oppressed by the febrile poison.

Repeated experience proved the inutility, if not positive injury, of administering the quina either within two hours

before the commencement of a paroxysm, or during its continuance; for although deafness sometimes followed, yet the paroxysm was not mitigated in severity; and there is reason to believe that, in a few cases, it tended to *mask* the succeeding exacerbations, which were not clearly perceptible; the skin being hot in a minor degree; pulse about 100, sharp; total absence of sleep, &c. After these symptoms continuing for a longer or a shorter time, a well-defined paroxysm would suddenly occur, proving fatal in some instances.

Where the disease assumes the continued form, the remissions ceasing, quina is of no use; calomel, James' powder, nitre, and opium, with the hot foot-bath, blistering, and, if necessary, leeches to the head, afford the most certain means of relief; but as soon as a partial or complete remission is brought about, the quina should be resorted to.

The specific action of the quina upon the nervous system, evidenced by ringing in the ear or deafness, was frequently manifest after eighteen grains of the medicine had been taken; but in all cases, except some visceral congestion existed, or the proper time for its exhibition not chosen, thirty or thirty-six grains had the effect. And in but one case, out of nearly 900 subjected to its influence, were any bad consequences experienced. In that instance there was sudden sinking or collapse, which speedily passed off on the timely exhibition of stimulants.

The quina having been duly administered, diaphoretics were continued, with appropriate remedies for any complication, until the period at which a paroxysm might be expected had passed over; then, everything being favourable, the administration of quina in lesser quantity was begun (eighteen to twenty-four grains, according to the severity of the previous attack), usually commencing two or three hours earlier than on the preceding day, and, if practicable, six hours after the hour corresponding to the *commencement* of the former paroxysm; the object being to give the quina at the most favourable time,

when the nervous system was most easily brought under its specific influence.

After a short experience, it was found requisite, in all the severe cases, to keep up the action of the quina for three days, administering a less quantity each succeeding day, observing the rule stated above.

With many others of the profession, I was doubtful of the propriety of exhibiting very large doses of quina, from an apprehension of its producing dangerous symptoms, either sudden collapse, or cerebral congestion; however, when used to the extent of thirty or thirty-six grains in from four to eight hours, there is sufficient evidence to prove, not only the absence of dangerous results, but the decided and manifest benefits accruing from its administration,—not alone confined to its primary effect of preventing the recurrence of a paroxysm, but extending to its secondary, though no less important influence, in relieving the engorged liver and spleen before their structure had become irretrievably injured and disorganized, by a too long continuance in the unnatural condition caused by an attack of periodic fever.

There is nothing new in the exhibition of large doses of quina for periodic fever, but to Dr. Ferguson, Deputy Inspector of Hospitals and lately principal medical officer in China, who had previously tested its efficacy in the West Indies, belongs the credit of introducing it for the treatment of Hong Kong fever. His predecessors reported quina to have signally failed.

The majority of those cases of remittent fever coming under the notice of the civil practitioners, yielded to calomel and diaphoretics in the hot stage, and two or three grain doses of quina during the remissions.

This remark does not apply to the cases observed in 1843 and 1844, which were similar in every respect to, and equally malignant with, the bad cases presenting this year in the 59th hospital. The bleeding and calomel treatment was tried in

1843 and 1844 with almost uniform ill success, while several cases were saved by the exhibition of stimulants. Depletion and antimonials were equally unsuccessful in the 59th hospital.

One day's observation of the disease in the military hospital was sufficient to demonstrate, that quina in small doses was inadequate to prevent a recurrence of the paroxysms of the fever. I, therefore, tried the large doses with signal benefit, and I noticed, in some cases, that the omission of the quina in the remission, until the proper period for its exhibition had passed, lost the patient his only chance of existence, as a fatal paroxysm quickly followed, and gave no second opportunity of supplying the omission.

Treating all cases at the outset as if they might be expected to prove urgent, administering the quina during the first remission in large doses, proved in practice highly satisfactory, an opposite course tending to protract the recovery by only partially subduing the disease.

The freedom from visceral disease of those cases treated with quina at an early stage was marked; many of the worst cases of the month of August being among those now free from organic lesion,—a small minority.

Mercury and opium, with fomentations and sinapisms, were decidedly efficacious in the acute cases in relieving the enlargement of the liver and spleen; and even in those chronic cases, in many of which the spleen could be felt through the abdominal parietes, reaching down nearly to the crest of the ilium, enormously enlarged and indurated, the best results followed the cautious administration of mercurials combined with, or followed by tonics, as iron and bark, and the inunction of iodine ointment, with hydriodate of potash internally.

Many of the cachectic cases had obscure febrile symptoms on admission, and were benefited by quina in the first instance, before proceeding to the employment of other remedies.

Insomnolence was much complained of after the febrile symptoms had ceased, and in some cases persisted for a number

of days. Many were relieved by opiates, but in others this symptom only subsided on the strength and appetite returning under the use of tonics and stimulants.

In some instances the deafness caused by the quina remained for a week or more, in others, where it was given shortly before a paroxysm, the deafness would suddenly vanish on its approach; while again, in other instances, there would be no deafness until the period at which an exacerbation would have taken place in the regular course had passed by, when, as if the remedy had at length gained the mastery over the disease, its specific action upon the nerves of hearing would suddenly become manifest.

Several cases were noted where the good effects of quina in combination with opium were exemplified in those cases of fever complicated with diarrhœa or dysentery, or when these affections assumed a certain periodicity. Several were speedily cured, where the alvine dejections were of the very worst character, with blood and mucus, flocculent or clay-coloured stools, and in one even false membrane.

After the commencement of the cold weather, bowel affections, as I have before remarked, became more frequent in connexion with the fever, evidently a translation of disease from the skin to the intestinal mucous membrane, the cutaneous surface in these cases being usually cold, and bedewed with an unctuous sweat, instead of being hot and dry, as in the more regular paroxysms. Warm fomentations, the diaphoretic mixture, with opium, and, if necessary, brandy or wine, followed by quina, proved most successful.

Another phase of the malady, which may be termed the *choleric form*, as it simulates Asiatic cholera, was met with in several instances; a case admitted on the 21st of October was illustrative of this.

On admission there was profuse sanious discharge from the bowels, their contents being poured out unrestrainedly, saturating the bed, and running down upon the floor; collapse,

cold surface and extremities; no pulse at the wrist; severe cramps; nausea and vomiting; the countenance blue and sunken, and nearly, if not quite as much altered in expression, as in the regular Asiatic cholera. The patient stated that he had an exacerbation of fever the day previous to entering the hospital, and another on the morning he came in. An injection of one scruple of acetate of lead with thirty drops of laudanum was administered, the anus being kept mechanically closed for some time, to prevent its ejection. This completely checked the bowel affection. Brandy, æther, and ammonia, with laudanum internally, and warmth and frictions externally, gradually restored the circulating system to its normal condition. When the strength had been sufficiently recovered, quina was administered, and a speedy convalescence established.

During the month of October, several cases of fever came under treatment, with dry, hot, and constricted skin, persisting for thirty-six hours or more, but ultimately yielding to calomel, nitre, James' powder, and opium, with hot fomentations or pediluvia, and sinapisms. Congestion of the liver and spleen was evident in these cases (usually first admissions, and men previously acclimated in the West Indies); where the pulse became less frequent, with diaphoresis and cool surface, quina and blue pill were resorted to. In one of these cases, leeches to the temples for continued headach; and in another, to the right hypochondrium, to relieve hepatic congestion, were found necessary.

During the cold weather, ptyalism was more easily induced, but not showing itself until after the subsidence of the febrile symptoms.

Boils have an evident connexion with the fever endemic in this colony, sometimes taking its place by determining to the surface. In the majority of the severe cases, a large crop came out during the convalescence, and seemed to assist the "vis medicatrix naturæ." Their appearance always indicated the entire subsidence of the febrile paroxysms.

Strangury was almost universally complained of where blisters were applied, but easily relieved by opium and warm fomentations, or the hip-bath.

The warm foot-bath, *used in the recumbent posture*, was found exceedingly useful in inducing diaphoresis, when there were much visceral congestion and a protracted hot stage.

Much vigilance was required to prevent the serious cases rising from bed to cross the ward, which sometimes was done to obey the calls of nature, in others without motive. The exhaustion resulting from such exertion proved too much, in some instances a fatal issue ensuing.

Many on admission represented themselves as being free from fever, but complained of extreme weakness, lassitude, loss of appetite, and headach. On the exhibition of twenty-four to thirty grains of quina, followed by bark and wine, these symptoms gradually disappeared.

During the continuance of the paroxysms, wine or brandy was prescribed according to the peculiarities of each case; the great majority required stimulants, with light nourishment, as sago and chicken-broth, with tea as a drink. After three or four days, the diet was increased, and wine and beer, with decoction of bark and nitric acid, prescribed during the convalescence.

Desquamation of the cuticle was frequent during convalescence.

Experience in my own person, as well as in numerous others, has proved to me that a paroxysm of fever may be averted by the timely exhibition of prophylactic doses of quina, from twelve to eighteen grains, in two or three portions, on the first occurrence of any anomalous pains in the back, head, or chest, languor, lassitude, distaste for food, &c. Where these symptoms continue unheeded, a paroxysm invariably follows, and much might, therefore, be done amongst the troops in saving life, preserving from organic disease, and lessening the liability to relapse, by attending to this fact. If

the mortality amongst the troops is to be diminished or checked by medical agents, it must be in the barracks, and not in the hospital alone. Were each man, when first attacked with symptoms of fever, treated with quina, a large amount of disease and death might be averted.

Much good may be expected from the embarkation of the troops during the summer months,—which the government at home has at length sanctioned,—provided they are exempt from night-guard at the barracks, the duty of watching which could be much more efficiently discharged by native Chinese.

In the West Indies I have been informed that it is a common practice for residents to take a dose of quina at the full and change of the moon as a preventive against fever.

Pains were frequently complained of in the jaws, teeth, chest, abdomen, one or both arms, and, in two instances, paralysis of the extensor muscles of the fore-arm occurred. There were generally accelerated pulse and increased heat of skin accompanying.

These affections were almost always relieved by quina, blue pill, and opium in combination; some were cured by bark, but their progress and termination proved them to be febrile manifestations and not local inflammations, being exclusively neuralgic. Their occurrence would tend to prove the existence of a latent poison in the system, requiring but slight accidental or exciting causes to develop it. In one instance pain was complained of in the chest, with some difficulty of breathing; a blister was applied over the seat of pain, and some expectorant medicine prescribed, this, instead of relieving, seemed only to aggravate the symptoms. Some hours afterwards a febrile paroxysm supervened, which was treated in the usual way, and there was no recurrence of the pectoral affection.

In one case there was much pain in the course of the brachial plexus. The arm became quite powerless. This man had suffered much from bowel complaint, and was extremely weak and emaciated; various remedies were tried without any

benefit. Quina was administered, and the affection speedily cured.

Two other cases were remarkable for the long continuance of giddiness, with slight occasional headach, after convalesence was established. Shaving the head, blistering the nucha, cold douche, with a full diet, bark and ale internally, were tried ineffectually. In one the gums were slightly touched with blue pill, but without any change for the better. These men could scarcely stand erect, or walk without assistance; the pulse was regular, appetite good, bowels free. Viewing it as a disturbance of the circulation within the cranium, the vessels not resuming their previous accustomed condition, flying blisters to the scalp, as recommended by Dr. Graves, were tried, which in a few days did more good than weeks' persistence in the previous remedies.

The *mortality* may be shortly summed up as follows:—From the 1st July, 1850, to the 30th January, 1851, the number of cases admitted into H. M. 59th regimental hospital was 2611, and of these 112 died; remittent fever being the cause of death in 72 out of that number.

The average duration of the fatal cases of remittent fever, excluding all above sixteen days—as dying of the sequelæ and not of the disease itself, was $4\frac{1}{3}$ days, to which should be added three days (one, as the patients are admitted on one day and appear on the books the next, and at least two days more, during which the disease has proceeded before admission to hospital is sought), making the true average seven days, which is correct, the cases usually terminating fatally either on the fourth or fifth day, or on the ninth or tenth.

The frequent occurrence of convulsions in sudden collapse makes it a matter of regret that the head was not examined in all cases after death; in the first few instances in which I had an opportunity of making a *post mortem* examination, cerebral effusion was discovered; and, on lowering the head, fluid would continue to flow from the spinal canal. *Too much stress cannot be*

laid upon this important pathological fact, as the impression has hitherto been general, from the reports of former observers, that no lesions of moment were to be found after death from Hong Kong fever.

In every instance that came under my notice, where convulsions or sudden collapse took place, effusion was found, either in the ventricles or at the base of the brain. Two or three were not examined, owing to want of time, as the urgent requirements of the living precluded the requisite attention to the dead. In the latter months diseases of debility prevailed: cachexia, effusions into the serous cavities, anasarca, &c., resulting from the frequent relapses of fever, permanently reducing the tone of the vital powers.

I may here remark on the fearful amount of sickness and mortality which has prevailed amongst the troops stationed in Hong Kong; and after an experience in the climate of ten years, which the military have now had, the mortality during the past has exceeded that of any former year (Stanley, in 1845–6, excepted, where the deaths reached 37 per cent.) The mortality for the past nine months, viz., from 1st April to 31st December, 1850, has been, in the European troops, more than 20 per cent., in the native troops 9 per cent., and in the whole force 16⅓ per cent. Against this we might compare the healthiness of the naval forces, and of the civil inhabitants of the island.

To obviate this continued sacrifice of human life, a few simple and practicable alterations would suffice, ameliorating the condition of the soldier and enabling him to enjoy an equal ratio of health with the more favoured inhabitants of the island. The reputed pestilential nature of the climate is now only supported by the military inhabitants, as other individuals, untramelled by their rules and regulations, enjoy an equal if not greater amount of health than falls to the lot of those located within the tropics, but whose native or more congenial clime is in the temperate zone.

The embarkation of the troops on board ships in the harbour during the summer months, or for the six months from April to October, has long been pressed upon the Government. The barrack accommodation is not suitable to a tropical region, where each man ought to have a separate apartment, and other appliances for the preservation of health, not within reach of the private soldier. As the Government has decided on adopting this measure, it need not be further dwelt upon, except to point out, that if a number of the men be detained on shore to guard the barracks from plunder or attack at night, and exposed in the open air, they must inevitably suffer.

The entire abolition of night-guards would, of itself, have a potent influence in diminishing the mortality; the duty could be much more efficiently discharged by Chinese, adopting their system, which is that in use amongst the merchants, whose property, though far more valuable than the whole contents of the Government buildings, is safely protected without the aid of soldiers. A monthly payment to a respectable Chinese, who would guarantee against loss, employing watchmen of his own, would give ample security against petty theft, and to guard against any attack in force, a sufficient number of soldiers could be told off who would sleep in the guard-house, or other building, ready to turn out if called upon.

The third measure, and *one of vital importance*, which has been totally neglected, and last year was impracticable, owing to the scarcity of medical officers, is the prompt administration of remedies on the first invasion of disease. This can only be effected by the surgeon or assistant-surgeon visiting the men in barracks daily, and instituting minute inquiry, as the soldiers, in many cases, do not report themselves ill, until they either get alarmed at the increasing severity of the paroxysms, or, becoming insensible or delirious, are carried to hospital by their comrades.

The fourth measure is an alteration of the scale of dietary, the mode of cooking, &c.; and the allowance of a more liberal and varied scale, with wine and ale for the weakly.

These comprise only the more prominent features of the system calling for amendment, but there are many others which might be noticed.

Hong Kong, 31*st January*, 1851.

Art. XII.—*On the Diagnosis of Diseases of the Stomach.* By Henry Kennedy, A.B., M.R.I.A., Fellow of the King and Queen's College of Physicians in Ireland.

The "Medical Miscellany" of this Journal for May, 1851, contains some most valuable remarks on certain affections of the stomach, from the pen of Sir Henry Marsh, as also some interesting cases given by Drs. Lynch, of Loughrea, and Little, of Sligo. In the same number of the Journal will likewise be found the details of a most important case of organic disease of this organ by Mr. Adams. The perusal of these cases brought to my mind some instances of a similar kind which have come under my observation from time to time, and which appear to me to present features of sufficient interest to entitle them to notice. The remarks, however, which I intend to offer, will be confined solely to a few points bearing on the diagnosis of these affections, for I believe this to be a part of the subject which is far from being yet cleared up.

There are few medical men who have been engaged in practice, for even a limited period, but must have been struck with the fact, that the most serious and threatening symptoms of stomach disease may exist, and be even persistent for a considerable time, and yet in the end the case may turn out to be one of functional disease merely, and the patient get quite well. And, on the other hand, a patient may labour under the most formidable organic disease of this organ, and yet scarcely present a single symptom indicative of its presence. These

two propositions it is essentially necessary to keep ever in mind; and it may be doubted whether they are yet sufficiently recognised. Before proceeding farther I shall illustrate them by the following cases, briefly narrated:—

Case I.—Some time back Mr. Cusack exhibited to the Pathological Society a specimen of disease of the stomach of an extraordinary extent. Literally three-fourths of the organ were converted into malignant disease. All the coats were involved, and the mucous membrane presented one sheet of fungoid disease. But what was extraordinary was, that the individual from whom it was taken had been able to take his food, and made no complaint until within a very few days before his death.

Case II.—A medical gentleman, about fifty-five years of age, had long been what might be described as delicate. He had been in the army, and on his way home from Jamaica was obliged to use, for some weeks, bread of a very inferior quality. This disagreed with him even more than common, and before he landed he was suffering daily from dyspepsia of a severe character. On reaching home the symptoms did not abate, and shortly afterwards he was invalided. From that period until his death, which took place some months later, he was never free from suffering, referred to the stomach. He was seen by several eminent gentlemen; the symptoms he chiefly laboured under were constant pain, nausea, loss of appetite, and occasional attacks of pyrosis. On one occasion he threw up a considerable quantity of blood; but at the time there were some doubts as to its source. He had some cough, which, with expectoration, increased towards the end; and he finally sank, reduced to the very last degree of marasmus, and never having lost the symptoms referred to above. I assisted Dr. Kirkpatrick to make a *post mortem* examination. On first view the stomach appeared perfectly healthy, and it was only after a very minute inspection that we were able to detect two small ulcers, each about the size of a split pea, existing close to each other, in

the great extremity of the organ. The coats, too, of the stomach appeared thinned, having probably partaken of the general marasmus. In the lungs was found some tubercular matter, in large masses, but not occupying any particular site.

Case III.—Mr. ——, a professional gentleman, began to suffer from pain in his stomach, chiefly after his meals, and more frequently after his breakfast than at any other time of the day. He was at this period twenty-six years of age, of tall stature, and had been, though subject to occasional headachs, previously healthy. He had always, however, been inclined to constipated bowels. The attacks, in the first instance, were slight, and were more of the character of painful digestion than anything else: for at a certain period after each meal he felt more or less uneasiness. By degrees, however, they became more severe; and as they did, their character somewhat changed. They were now, in a very marked degree, periodic; that is, the patient would be six weeks, or even longer, free from any suffering, and then an attack would occur very suddenly. On many occasions he went out on his ordinary business in the morning, and would return in an hour or two suffering from the attack. He always referred its commencement to a point opposite the pylorus, from which the pain would spread, but not to any great extent.

I am quite unable to describe these attacks[a]. They were perfect whirlwinds while they lasted, which they usually did from four to six hours; and the patient's sufferings seemed to be agony itself. He frequently expressed himself as if he should die in consequence of them. While the fit was at its height vomiting took place, but never of any large quantity of fluid; and as it passed off, the stomach began to secrete air, which it would then do in enormous quantities, and was always considered by the patient himself as a good sign. It is only

[a] Any one who will call to mind the story of the "Martyr Philosopher," given with such graphic effect in the "Diary of a Physician," will have a good idea of the patient's sufferings.

necessary to say further of this case that he has been completely free from these fearful attacks for a period of upwards of four years.

Though other cases might easily have been given, these appear to me quite sufficient to show what difficulties surround the question of diagnosis in diseases or affections of the stomach. The well-known fact, too, might be adduced here in further proof of this position:—that the disease known as chronic ulcer of this organ has frequently led to a fatal result from perforation, without any complaint having been previously made by the patient; and their usual condition would seem to bear out this view, for many of these cases present all the signs of the most robust health[a]. But if we come to inquire why such difficulties exist, the reason appears to me to be in great part explained by the fact, that both the functional and organic affections of this organ give rise to the same series of symptoms; and this will be made evident, if we try to place the signs of organic disease in one column, and those of functional derangement in another; for we shall then find that both lists will contain very nearly, if not exactly, the same series of symptoms. Pain, nausea, vomiting, flatulence, sense of distention, pyrosis, throwing up more fluid than what has been taken, hematemesis of different kinds, and other symptoms, are each and all common to either state. Hence, I repeat it, the difficulties which so frequently arise in arriving at an accurate diagnosis[b]. But it will be asked here, are there no signs which may be considered as absolutely indicative of organic disease? And this leads me to notice more particularly two symptoms, on which many have placed an entire reliance. I mean the symptom known by the name of the black vomit; and secondly, the presence of a tumour of the stomach itself.

[a] An interesting paper by Dr. Lees, on Perforation of the Stomach, will be found in the tenth volume of the New Series of this Journal.

[b] A similar line of observation has, I find, been pursued in the "Bibliotheque du Médecin-Praticien," edited by Fabre. 1851. Vol. ii. p. 490.

As to the first of these, it appears to me too much stress has been laid on it as diagnostic of organic disease, and, for this simple reason, that it occurs in cases where we have positive evidence there is none. For, what is this black vomit? Nothing, I believe, but an exudation of blood, altered somewhat by the secretions of the mucous membrane of the stomach; and this, I presume, few will assert, can only take place where there is ulceration or fungoid disease. Hemorrhage from the stomach we know can occur where there is no morbid change whatever in the mucous membrane, as in some cases of enlarged liver. I have seen instances of this nature, where the first blood thrown up was of a bright red colour; but as the attack passed off, it got gradually darker, and finally put on all the characters of black vomit[a]. Yet, in these cases, the mucous membrane was found healthy, though congested. But further, many acute diseases exhibit this symptom in a very marked degree, and a most serious symptom it ever is. I have seen it in bad cases of scarlatina, of fever, small-pox, and of puerperal fever; also in a case of ruptured[b] uterus; and on examination of such cases I have found no organic change in the mucous membrane. The yellow fever, too, of warm climates very generally presents this symptom. Hence, the conclusion appears to me a fair one: that this particular symptom may occur in the more ordinary affections of the stomach, where nothing but functional derangement exists; and before these remarks are concluded, I hope to prove it.

The second symptom I have alluded to, the existence of a tumour, is one of more moment, and it must be allowed that in the great majority of instances it will lead us to a correct

[a] Something very like this may also be seen in cases of hemorrhage from the lungs.

[b] The occurrence of the black vomit in this case would appear to be important to notice, for it points out a state of the system which cannot be considered healthy, and which may predispose the uterus to an alteration of structure that may lead to its rupture.

diagnosis; yet even this symptom, palpable though it be, may deceive us; and I would call particular attention to this fact, for, after having made some research on the matter, I cannot discover that it has been hitherto noticed. The point I would observe upon is this, that a tumour may exist in the stomach, which, in the progress of time, may entirely disappear; or, at least, get into a state in which it may not be palpable on external examination. I believe two distinct circumstances may give rise to such a state of things. Before noticing these, however, I would just observe on the much greater facilities which some subjects present for the detection of tumours than others; and it is a point always to be kept in mind. There are, I presume, few who have not met instances where all the symptoms would lead one to look for the presence of a tumour which did in reality exist, but which no external examination could detect. As far as I have seen, this difficulty has been in great measure due to the natural depth of the chest, rather than to any other single cause, such as the thickness of the abdominal parietes, or the site of the tumour. So that it may be safely stated, that the absence of all external sign of a tumour would not justify us in asserting that none existed.

But, further, there is a state of some of these tumours which I am not sure has been hitherto noticed, I mean their mobility, not from external handling, but by the act of respiration. In a case which I saw, through the kindness of my friend Surgeon Neville, of Brunswick-street, it was most remarkable. At every inspiration the tumour moved fully one inch and a half, and, what is of more importance, this sign was the means of settling a question which had previously been raised, namely, as to whether the tumour was an aneurism or not, for it had a very strong pulsation[a]. Whether the mobility was, in this particular instance, more than ordinary I cannot say, but it

[a] The *post mortem* examination of this case disclosed a tumour of a malignant character, which formed a complete circle on the mucous membrane of the stomach, close to the pylorus. It was exhibited at the Surgical Society.

is worthy of remark that the patient was of unusual stature, for, though he was a tailor, he was six feet four inches in height. This mobility, then, even granting that it is not always present, appears to me a symptom which ought to be looked for in this class of cases[a].

It has been already stated that a tumour which has been palpable to the touch may disappear, and this may, I believe, occur in either of two ways. In the first the tumour, so far from enlarging as the disease advances, lessens. This we know to be common in cases of malignant disease, as in cancer of the breast when ulceration is going on, and the same may occur when a similar disease exists in the stomach. This has happened twice under my own observation, and in one instance it was so marked, that a doubt was thrown on the accuracy of a previous diagnosis. An examination, however, after death, solved the difficulty, by disclosing a large ulcerated surface, with some traces of tumour still remaining. Thus then, I believe, and it is comparatively well known, our diagnosis may in one way be rendered obscure. Before describing the second I shall give some details of the following case:—

Case IV.—Miss ——, about thirty years of age, unmarried, suffered from a sharp attack of English cholera, in August, 1849. She was of the sanguineous temperament, but of a listless habit of body. The menstrual function was quite healthy. From the attack of cholera she does not appear to have completely recovered, for shortly afterwards, within a month, she began to throw up a small portion of each day's dinner. This gradually increased, until, in the course of four months, everything taken in the way of food came up, though,

[a] Through the kindness of Dr. Lees I have very lately seen a case of abscess of the liver, in which the tumour presented to the right of the epigastrium, and was very distinctly moved downwards by the act of inspiration, a point of some importance to determine, as it showed that at the time no adhesions had taken place. This subject seems worthy of further investigation.

curiously enough, medicine did not. With this state of stomach the patient complained of a fixed pain, which she referred exactly to the pylorus, and where, when she was examined in bed, a distinct tumour could be felt. It was circumscribed, and painful on pressure, and was recognised by Sir H. Marsh, who, at this period, saw the patient with me. What she threw up at first was merely her food unchanged. In the course of a month, however, a large quantity of clear fluid, mixed with saliva, came up. This fluid she described as being salt, bitter, and burning by turns. Such was what might be called the persistent state of this patient until the latter end of January, and beginning of February, 1850; that is, about six months from the time she began to throw up her food. At this period, attacks of a much more serious character were superadded. These attacks were wonderfully periodic, taking place regularly each second day, between five and eight o'clock in the evening. They were preceded by shivering, paleness, and great anxiety of countenance; at the same time that the pulse, which commonly beat between 80 and 90, rose to 130, and even 140. In this state the sense of burning, from which she was never free, became very much aggravated, and she described it as extending from the stomach to the throat; which latter part was constantly excoriated from the nature of the fluids vomited. With these severer attacks she now also began to throw up a quantity of stuff having the characters of black vomit. It was of a dark brown colour, and was always attended with a much larger quantity of fluid than what the patient had taken. On several occasions now, too, what came up was tinged with blood[a]. It will be easily understood that

[a] The microscope was not used in this case, there being nothing in what was rejected to lead us to suspect that anything of either an animal or a vegetable organization existed in it. There can be no doubt, however, that the instrument can afford most valuable assistance in some cases; as proof of which I would refer to a late number of the Medical Times, where a case of great interest is given very fully by Dr. Jenner of London; and also to

from the violence of these attacks and their constant recurrence, the general health must have suffered severely; and such was the fact. Loss of flesh went on with great rapidity. She became reduced to a skeleton, being quite unable to leave her bed, and symptoms again and again threatened that her sufferings would be aggravated by stripping. During the period she was so reduced, Dr. M'Donnell, whose valuable assistance I then had, felt with me the tumour repeatedly.

It is unnecessary to pursue the history of this case further; it occupied many months more; suffice it to say that the patient has perfectly recovered, *and that now no tumour can be felt.* It must be allowed, however that at one period of the case the prognosis was gloomy in the extreme.

This case I have given at some length, as it appears to me to be one of considerable interest. The patient certainly presented a series of symptoms from which few have recovered. She had all those which are thought to mark the presence of organic disease, including the black vomiting, the throwing up of much more fluid than she had taken, and the presence of a tumour. Of the exact nature of the case I do not profess to offer anything like a positive opinion. In the first instance it would appear to have been an example of the affection so well described by Sir H. Marsh; while at a later period there were strong grounds for supposing that actual disease had taken place, possibly some form of ulceration. This, however, is only conjecture, though it is borne out by the extreme emaciation which the patient at one period presented. This symptom is, I believe, amongst the most constant of those attendant on organic disease; and yet it does not always exist, as some of the cases of chronic ulcer fully confirm.

But how are we to account for the tumour and its subsequent disappearance? It will be recollected that it was felt by

Dr. Todd's papers in the London Medical Gazette. Cases also, illustrating its application, have been brought before the Dublin Pathological Society by Drs. M'Dowel and Lyons; but they have not been yet published.

Sir H. Marsh, and repeatedly by Dr. M'Donnell and myself. My conviction is, that at no period of the case did any morbid growth exist but that what was felt was due to an irregular action of a portion of the muscular coat of the stomach itself.

Any one in the habit of opening bodies must have been often struck with the varieties which the stomach in its general aspect presents. In one subject it will be very large, and apparently dilated; in another it is found contracted to a remarkable degree, and its coats, to all appearance, thickened; while in a third it presents an example of the hour-glass contraction, described so long since by Sir Everard Home. The other hollow viscera, too, we know, take on at times this irregular action of the muscular coat, as may be seen in parts of the intestines, and still more strikingly, perhaps, in the uterus. In subjects favourable for examination, I have myself felt portions of the intestines, knotted, as it were, so as to afford distinct evidence of irregular action going on; and which has all disappeared with the cause which gave rise to it.

So I take it to have been in the case just given. The irritation, which there can be no doubt of existed in the mucous membrane of the stomach, caused a spastic state of contraction of a part of the muscular coat, and this, in its turn, caused a thickening, a temporary tumour so to speak, which it was possible to feel through the thin abdominal walls. As the irritation lessened, however, this spastic state gradually subsided; and hence we have an explanation of the disappearance of the tumour, and the recovery of the patient. To suppose that there existed in the stomach a tumour caused by organic disease which subsequently disappeared, would be a straining of experience farther than any case on record would justify.

Much might be said on the treatment of these cases, for it would appear to be anything but yet settled. For the present, however, I must confine myself to one remark. At the period, in the case last given, when there were good grounds for supposing that some ulceration existed, I carried into effect an

idea which had been long in my mind, viz., that in such cases we might give medicines for the express purpose of healing the ulcerations, in fact of acting locally on them, as if we had an ulcer on the surface of the body to deal with. With this view creasote was given, to the amount of three drops, three times a day; and, as I believe, with advantage. Nor do I see any reason why other medicines as well might not be administered with this intention, and in cases where it would appear to be too common to consider them as being beyond the resources of our art, as, for instance, the disease known as the chronic ulcer of the stomach. In this disease there is no evidence of anything of a malignant character, and, of course, nothing (amounting, I mean, to an impossibility) to prevent its healing. We know there is proof on record of such an occurrence having taken place; and consequently our efforts should be directed, not merely to palliate, but to cure, difficult though its attainment may be. But where is there not difficulty in medicine? With this object in view, then, I venture to make this suggestion.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Fifth General Report on the District, Criminal, and Private Lunatic Asylums in Ireland; with Appendices. Presented to both Houses of Parliament by command of Her Majesty. Dublin. 1851. Folio, pp. 35.

Report of the Proceedings of the Meeting in London of the Association of Medical Officers of Hospitals for the Insane in Great Britain and Ireland. 1851.

Fifth Annual Report of the Commissioners in Lunacy to the Lord Chancellor. Ordered by the House of Commons to be printed, August 15, 1850.

The American Journal of Insanity. July, 1850.

Remarks on Insanity, its Nature and Treatment. By Henry Monro, M. B. Oxon., F. R. C. P. In Two Parts. London: Churchill. 1850. 8vo. pp. 150.

On the Reciprocal Agencies of Mind and Matter, and on Insanity. By J. C. Badeley, M. D. Cantab., Inspecting Physician to the Lunatic Asylums of Essex, &c. London: Churchill. 1851. Royal 8vo. pp. 60.

The Journal of Psychological Medicine and Mental Pathology. Edited by Forbes Winslow, M. D. Nos. 14 and 15, for April and July, 1851.

Crichton Royal Institution for Lunatics, Eleventh Annual Report. 1850.

Thirteenth Annual Report of the County Suffolk Lunatic Asylum. 1850.

Third Annual Report of the County Somerset Lunatic Asylum. 1850.

Annual Report of the Oxfordshire and Berks County Lunatic Asylum. 1851.

Thirty-seventh Annual Report of the Royal Glasgow Lunatic Asylum, for 1850.

Annual Report of the West York Pauper Lunatic Asylum at Wakefield, for 1850.

Annual Report of the Gloucester Lunatic Asylum, for 1850.

Annual Reports of the District Lunatic Asylums of Belfast, Carlow, Clonmel, and Maryborough. 1851.

Annual Report of the Royal Edinburgh Asylum for the Insane. 1850.

Second Annual Report of the North Wales Lunatic Asylum at Denbigh. 1850.

Annual Report of the Royal Bethlem Hospital. 1850.

Report of the Alleged Lunatics' Friend Society. London. 1851. Pamphlet, pp. 39.

A Letter addressed to the Right Hon. the Committee of the House of Lords, sitting on the Master's Jurisdiction; also for the Consideration of the Two Houses of Parliament. 1851. Pamphlet, pp. 12.

Summary of Suggestions for Additions to the Law of Lunacy. By Purnell B. Purnell. Gloucester. 1851. Pamphlet, pp. 11.

Since our last extended notice[a], in connexion with the several publications and official reports on insanity and lunatic asylums, which had then appeared, both authors and reporters have been actively engaged in supplying further additional *materiel* in proof of the efforts that are being made, if not to throw new light on, at least to add to the literature of the former, and to give evidence of the increasing numbers, satisfactory progress, and scientific and humane management of the latter.

From amongst the various works now before us, bearing upon the foregoing subjects, we have, on the present occasion,

[a] Vol. x. N. S. p. 415.

selected those, the titles of which are given above, to bring under review, feeling persuaded that a portion of our columns devoted thus soon again to their consideration will not be misappropriated, nor the time of our readers misapplied, in giving them an attentive perusal.

Commencing, then, with the first on our list, "the Fifth General Report" of Drs. White and Nugent, we are gratified to find "a blue-book," eminently entitled to commendation, its contents being most valuable and suggestive. And, *en passant*, we desire to remark, that in England the functionaries discharging duties similar to those of our Inspectors in Ireland, have the official title of "Commissioners in Lunacy," a title which we are of opinion should be applied to the same office in this country also, or rather (not to perpetuate so erroneous a term as *lunacy*) we would suggest, should be altered to "Commissioners of Hospitals and Houses for the Insane." On carefully reading the official report now under consideration, we feel fully justified in saying that it will bear comparison, both qualitatively and quantitatively, with that of the Commissioners of the sister country, not to mention those which have preceded it, and which have been duly noticed in this Journal. Its business-like, straightforward, and practical character, display a most intimate and pains-taking acquaintance with the several details of the important and confidential official duties which Drs. White and Nugent continue to fulfil so independently and satisfactorily, and with not less advantage to the public than credit to themselves.

With the view of doing justice to this Report, our desire would be to reproduce it largely in our own pages; but our allotted space being limited, we must be content just now with giving little more than a mere summary of its instructive and interesting contents. The accommodation for the insane poor in this country, as well as in Great Britain, is, even to the present time, entirely incommensurate with the absolute requirement of this much to be sympathized with and wofully afflicted portion of the human family; indeed, until of late years, their hapless and unprotected, we might say also uncommiserated condition, was little thought of by proud man, strutting about in the full plenitude of those faculties which were given to him, not to use in looking down carelessly and pitilessly on his own flesh and blood when reason had forsaken her throne. But it is truly cheering to find that, ere long, increased provision will be at command in this country for the due reception and comfortable maintenance of the class we have been referring to, the inspectors informing us that, by the end of the present

year, four new hospitals for the insane are expected to be in operation, viz., at Cork, Kilkenny, Omagh, and Killarney, which will unitedly contain 1100 inmates; and that soon in the new year the establishments in course of completion at Sligo and Mullingar will be in readiness to take in charge, both together, 520 patients more. With reference to the Richmond District Asylum, or the metropolitan establishment for the insane poor of the counties of Dublin, Meath, Louth, Drogheda (county of the town of), and Wicklow, the inspectors state that it has been lately enlarged, so as to receive 140 patients, besides the addition of various new domestic offices, such as kitchen, laundry, &c. &c., and thirty acres of land, on which a new hospital, furnished with 160 beds, is about to be erected. Now, on the subject of this so-called Metropolitan Asylum, we feel ourselves constrained to say, with all due deference to the sagacity of the Board of Public Works and the other authorities concerned, that we think, to use a homely but most expressive phrase, they have been "penny wise and pound foolish," in not "totally abandoning" it, by reason of "its locality and unsuitable construction as a curative hospital for lunacy." We cannot but deeply regret that Government should have been so short-sighted and narrow-minded as not to follow up to the letter the recommendation and desire, evidently, of the Inspectors, by the erection of a suitable *new* metropolitan asylum, leaving the dingy atmosphere and overcrowded and uncongenial neighbourhood of Channel-row, with all its unpleasing associations, for one more cheerful, in the open country, entirely apart from the noise of the city, and this, too, the worst part of it, full of lanes and purlieus of the vilest and most noisome description. To strangers and foreigners who visit our metropolis and public institutions as a matter of course, the surprise must be great in this age of improvement and advancement, more particularly as regards the provision made for the insane, when shown our Metropolitan Lunatic Asylum, and above all, with respect to its locality; for, added to as the grounds have been, and renovated and modernized as the Institution itself may be, the view around can never be improved, and nothing is of more importance in the treatment of the insane than an uninterruptedly open and cheerful prospect, which in its present site the Richmond Asylum can never have.

But unhappily, in Ireland, our rulers are too prone to do things by halves, and to make light of the advice of experienced and well-qualified persons, whose especial business it is to acquaint themselves with the minutiæ of matters which, to be

seen in all their bearings, must be studied closely and perseveringly, and who, accordingly, are alone competent to advise the uninitiated, however high in official position, especially in matters connected with the proper site and suitable arrangements of a lunatic asylum. The judgment of the Inspectors and medical officers of asylums we most decidedly maintain should be deferred to on so important a subject, and sole dependence should not be placed on the *ipse dixit* of the Commissioners of the Board of Public Works, against whose interference with the Inspectors we on a former occasion felt it our duty to protest.

However, not to pursue this subject farther, we observe that the inspectors state that, as regards some of the other district asylums, for instance, at Ballinasloe, Belfast, Clonmel, and Limerick, several improvements and additions are either completed, or in progress of being so, which will fully meet the existing necessities of the destitute insane of these districts.

On the general management of the public asylums in Ireland the following most satisfactory statement appears in this report:—

"We have reason to express satisfaction at the general arrangements and domestic economy of these institutions. Constant in our visitations of them, we invariably observe the utmost kindness of manner and considerate attention on the part of the physicians and superior officers to the various inmates, while the attachment of the lunatics themselves to their immediate attendants, affords a satisfactory proof that the latter fulfil their duties with humanity, good temper, and forbearance, moral powers, for which mechanical coercion will be ever found from experience both a harsh and inefficient substitute. This social condition of our public asylums, coupled with the attention bestowed on them by the governors, who are appointed for the most part from amongst the principal proprietors in the respective districts, for fiscal and general purposes, cannot fail to place them ultimately [why ultimately? are they not so already?] on a rank with the first establishments of the kind in any country."

The annexed extract, we are sure, must prove deeply interesting to our readers generally, containing, as it does, in a clear and succinct form statistical information of a valuable though painful kind connected with the actual amount, &c., of insanity in this country:—

"On an analysis from returns collected by us, of all the individuals in Ireland who labour under mental aberration, in its endless diversity of aspect and variety of symptoms, from simple imbecility to the lowest grade of congenital idiotcy on the one hand, and from

moral insanity with its comparative clearness of intellect, to raving madness on the other, they may be thus enumerated:

1. In public and local asylums, ... 2,913
2. In gaols, committed as dangerous, 1 Vic. cap. 27, . 280
3. In central asylum, Dundrum, 8 & 9 Vic., cap. 57, . 91
4. In poor-houses, ... 2,393
5. In private asylums, 5 & 6 Vic., cap. 123, ... 436
6. Abroad, unprovided for in public institutions, but some supported by their friends, ... 8,985

making a proximate total of 15,000 human beings, affected to a greater or less degree with a disease the most serious to which mankind is liable; not alone from the melancholy nature of the malady itself, its hereditary character, and facile transmission, but from the danger to which society is exposed from its too frequent excitement to deeds of fatal violence. It becomes, therefore, a subject of deep importance to provide against an evil of such progressive tendency. Fully a third of the cases of insanity we meet with are directly connected with a family predisposition to the disease, and it not unfrequently occurs to us to discover six or seven relatives, in close consanguinity, affected by it at the same time.

"The annexed table gives a general resumé of the unaccommodated insane; for the valuable information it contains, we are indebted to the kindness of the Commissioners of Poor Laws, who at our request directed the relieving officers of every electoral division in the Kingdom to make an accurate return, under certain specified headings, of the individuals in question resident in their respective districts. From the returns thus obtained, and amounting to over two thousand duly signed and authenticated, we arrive at the following result:

IDIOTS.		EPILEPTIC IMBECILES.		LUNATICS.	
Male,	1,990	Male,	1,644	Male,	452
Female,	1,684	Female,	2,736	Female,	479
Total,	3,674	Total,	4,380	Total,	931

"A total, as above stated, of 8,985, consisting of 4,086 males, and 4,899 females.

"Adopting the same classification for the 2,393 deranged inmates of unions and auxiliary workhouses we find them, thus circumstanced:

IDIOTS.		EPILEPTIC IMBECILES.		LUNATICS.	
Male,	471	Male,	350	Male,	77
Female,	645	Female,	739	Female,	111
Total,	1,116	Total,	1,089	Total,	188

"Or, 898 males and 1,495 females.

"We are aware that a more minute and better medical arrangement might be adopted, but for general and statistical information we hope the preceding one will be considered sufficiently explicit."

The Inspectors next enter very elaborately into the subject of providing for the 8895 insane of all classes, above referred to, for whose due restraint and care no means are as yet at command. It appears, however, that the asylums generally in Ireland, or those already built and being added to, and those entirely new and now in course of erection, will, when in full operation, accommodate a gross total of 4800 patients, the present actual accommodation in public and local asylums being only for 2913. According to the Inspectors' views the increased amount of room above referred to will be adequate "to meet all legitimate claims upon it, by a restriction of these institutions within their proper sphere as hospitals for the *cure* of mental disease; in other words, by confining them to the reception of lunatics who, in the first instance, afford a reasonable hope of recovery, or who, though deemed incurable, require particular supervision and care, from a strong inclination to acts of violence, or from some marked peculiarity of character."

But still the difficulty arises, what is to be done with the surplus between the 4800 which can ultimately be accommodated, and the 8985 requiring accommodation, that surplus being upwards of four thousand. Our own view of this matter is, that the so-called incurable or chronic cases which make up the great bulk of the inmates of the public asylums everywhere, should not most decidedly be circumstanced otherwise than they are at present, that is to say, to be left in the enjoyment of all the rights and immunities and privileges of the more recent cases. The idea formerly entertained of building separate institutions for chronic cases alone, we always looked upon as harsh and unnatural. The chronic insane are just as capable of appreciating kindness and liberality of treatment, and of receiving benefit from it, as the supposed curable patients. A large proportion of them are perfectly sane and amenable in a general way whilst under regular discipline; remove that discipline, however, and they are totally unfit to enjoy the liberty of free citizens. This class, too, is by far the most useful and serviceable in various ways in such establishments. Their attachments are strong to a degree; they have become familiarized with everything and every one around them; have confidence in their superiors, and, all things considered, enjoy a happy and tranquil existence in an institution in which they have spent year after year, and which

they look upon, in fact, as their settled and happy home. Now would it not be cruel in the extreme to draft off such to an incurable asylum, in which their comforts would be considerably crippled, and all old associations broken up? We hope no such idea will ever be carried into effect. We, however, would most strongly advocate the propriety of separating the epileptic, idiotic, paralytic, and entirely imbecile cases (those in fact whose existence is a merely vegetative one) from the recent and chronic cases, placing them in an institution for themselves alone (and not in the workhouses), which we are satisfied would be the best and most humane and practical way of settling this difficult question, and the only one that would prove ultimately satisfactory and really beneficial.

We wish our excellent and kind-hearted Inspectors would turn their attention to the above suggestions; we respectfully request them to do so, and perfectly convinced are we that they would entitle themselves to lasting honour by using the proper influence they enjoy, in their high official position, by recommending the adoption of some such course to remedy an evil which sooner or later must be boldly faced and permanently provided against.

We find that the total cost of maintenance in the district asylums, for the year 1850, amounted to £37,252 11*s.* for an aggregate amount of inmates of 2700, being a decrease of between £3000 and £4000 on the previous year, the number of patients being the same. With reference to this decrease the inspectors observe, that it is not alike in all asylums, being more marked in some than in others, owing, amongst other causes, to a difference of dietary, on which head they very properly remark, that a variation is not desirable, and that they propose recommending to the different local Boards "a uniform scale," a change which we think would be most desirable, and tend much to a still greater amount of good resulting to the patients by the adoption of a more liberal and nutritious diet-roll in all the asylums than at present. To this circumstance we called special attention in our last Review, maintaining, as we still do, that a diet more of the character termed generous than otherwise, would in the end be found the cheapest with such a class of persons whose disease is, in nine cases out of ten, the result of debility.

As to the recoveries and deaths respectively in our district asylums, they continue to offer a very favourable contrast with other establishments; a fact which speaks for their general good management and supervision, and most creditably for those in their immediate charge. Another circumstance which

redounds greatly to the high order of watchfulness pursued in their superintendence is, that for several years not a single case of suicide has occurred in them, save one last year, an exception, however, which, though unfortunate, detracts in no wise from the close surveillance that must be in constant operation for the prevention of an act, the infrequency of which, all things considered, is really surprising.

Though cholera was so generally prevalent and fatal in 1849, the mortality throughout the asylums amounted to twenty-six cases only, twenty-four of which occurred in the Limerick asylum in the course of a week, where its appearance was both sudden and inexplicable, the ventilation and every other hygienic arrangement being of the usual satisfactory description. A somewhat parallel case to this was the extraordinary irruption of this epidemic in the West York County Lunatic Asylum at Wakefield, which will be found more particularly referred to in another part of this Review.

The Inspectors, after referring to the liberal means provided for the curatively beneficial employment of the patients (which amongst the several asylums realized the profitable return, in the course of two years, of £2860), and some other matters of detail, proceed to remark on the appointment of physicians to the office of resident superintendents in the district asylums, stating that three vacancies having occurred since their last Report, each had been filled up by a medical practitioner of education and standing; and that this important change in the internal management of these institutions was productive of the best results. On this theme it is unnecessary for us now to say more than to repeat what we have already put on record, that great credit is due to the Inspectors for their unwearied and persevering efforts in getting this desideratum accomplished; but at the same time we feel bound to tell them that their work is not yet completed, these appointments being entirely at the will or discretion of the Lord Lieutenant of the day; for though our present enlightened Viceroy, Lord Clarendon, has gracefully yielded to the earnest recommendation of the Inspectors, supported by the voice of the profession and the public, in appointing physicians to our district asylums, as vacancies have arisen under his rule, yet his successor may or may not continue to follow the same good example. We would, therefore, again remind the Inspectors not to let the fitting opportunity pass of having this just rule confirmed by the law of Parliament (as in Great Britain). The Inspectors, in their Report, after showing how great the advantages are, and may be increasingly expected to

be, from educated physicians being the parties into whose hands alone the general treatment of the insane in our public asylums should be committed, next proceed to call the earnest attention of the Lord Lieutenant (to whom their Reports are always made directly) to the necessity of suitable salaries and superannuations being provided for these gentlemen:

"We may here, perhaps, be permitted respectfully to submit, for the consideration of your Excellency, who amongst the applicants for place to the important office in question (that of resident physician) has been guided in each selection simply by a desire to secure the most unexceptionable and best informed, that the salaries of the resident medical superintendents might with justice be increased, debarred as they are altogether from practice, and rigidly confined by duty within the precincts of their respective asylums. Two hundred per annum, considering their unceasing responsibilities, is a small support for men who have devoted years of labour, and no inconsiderable amount of means, to the acquirement of a profession by which they had hoped to obtain an honourable independence. In some asylums, no doubt, there are certain perquisites attached to the managership, but they are trifling and undefined; these, as in the recent appointment of a medical superintendent in Maryborough, we would completely do away with, and substitute a pecuniary allowance as more becoming to the parties, and more satisfactory for the institution itself.

"Had the original proposition of the Chancellor of the Exchequer, with reference to the support of lunatic poor from the Consolidated Fund, been adopted, much difficulty would be obviated on this head, and a uniform system could with the utmost facility be established in detail, for the maintenance and management of hospitals for the insane, as, under existing circumstances, the governors, however liberally disposed in the discharge of their trust as guardians of the public purse, are naturally cautious of innovations, no matter how advisable, when a direct and increased expenditure is involved. We believe were the government of this country to adopt a system prevalent abroad, and place institutions for the cure and treatment of lunatics (whose safeguard is of such importance to the general well-being of society), if not entirely, in part, at least, on State support, the result would be found satisfactory and economical in the end; whilst the sum thus saved to the community from the previous maintenance of asylums would become available for general medical charities. As a case in point, we shall instance the city of Dublin, which averages to the Richmond District Asylum £3400 a year, a sum which, if withdrawn from that establishment, would admit its equivalent of taxation for the benefit of the common hospitals of the metropolis.

"Taking into account the depressed condition of the country at large, and the great expenses incurred, from the necessity of erecting new asylums and of enlarging the old, we trust your Ex-

cellency will not consider us too presumptuous in this expression of our opinion, and in recommending that, at least, the salaries and support of all the officers and attendants therein, who are virtually appointed by Government, should be liquidated from the Consolidated Fund, and that provision should be made for the superannuation of those who, from advanced age or illness, are rendered unfit for public duty, and when long and faithful services entitle them to consideration. As we have formerly observed, great inconvenience is occasionally felt from the fact of boards of governors being induced, through motives of charity, to continue the inefficient attendance of the invalid and aged, in consequence of there being no funds for a retiring allowance."

The above recommendations and suggestions are well and ably put, and reflect the greatest credit upon Drs. White and Nugent. It is very seldom that we see persons in high office having the least thought or consideration as to the requital given to those directly or indirectly under their control; and we could not adduce stronger evidence than is contained in the foregoing extract in proof of the good and excellent spirit in which the Inspectors act, and always have acted, towards the officers with whom they come into official contact.

With regard to the first paragraph in the portion of the Report we have just quoted, it is well and truly remarked that the responsibilities of the medical superintendents of the asylums are unceasing. Are there any body of men who deserve the gratitude of their country more than they? Their days, and often, too, their nights, are given up to ministering to one of the most afflicting allotments that flesh is heir to. And what is their recompense? "Two hundred per annum;" barely sufficient to enable them to keep up the appearance of gentlemen. And when after years of the most anxious toil, and "unceasing" care, in the exercise of a vocation which of all others is calculated, through constant wear and tear of the mental and physical powers, prematurely to debilitate if not break down the constitution of the most vigorous, no provision is made for the worn-out superintendent to retire into private life, to enjoy his few remaining years in peace and quietude. But we hope to see this unbecoming and ungenerous state of things speedily altered, and the Irish medical superintendent placed on a par with his brother in the sister country, where the law specifically provides for a retiring allowance, and where in general a comparatively liberal salary is paid to this important public officer whilst in active employment. Considering that formerly the individuals appointed as "managers" of the district asylums were non-professional persons, of a

different grade altogether in the social scale to the present superintendents, the salary of "two hundred per annum" was a liberal remuneration for the minor services comparatively which they rendered, and the responsibilities which were imposed on them; but with the greatly increased duties and responsibilities now attached to the office of a superintendent, and the necessity of his being a member of the medical profession, double that sum at least would be scarcely an equivalent acknowledgment for his invaluable services.

A most interesting and important section in this Report is, that portion of it devoted to the rise, progress, and opening of the Criminal Lunatic Asylum at Dundrum, founded under the provisions of the 8 & 9 Vict. cap. 107, an Act which came into operation in 1845, but the asylum connected with which was not in readiness to receive its peculiar class of inmates until the autumn of last year. Public attention is now largely attracted to this subject in England where no such asylum is in existence, and the Association of Medical Officers of Hospitals for the Insane, at their recent annual meeting in London, most warmly and energetically took the question up, resolving to use their best efforts to have the law for a criminal asylum made applicable to England, referring to the Dundrum Asylum for superior treatment of its unfortunate charge. We wish we could quote at large the Inspectors' exceedingly interesting Report on this Institution, but we can afford space for only a few extracts from it. We ourselves, we may here state, have visited the Asylum more than once, and we can truly aver, that the treatment of its inmates is most considerate and humane, under the immediate superintendence of its worthy and amiable resident physician, Dr. Corbet.

The Report states that a parliamentary grant of £6000 was voted for the erection of this establishment, the situation of which must be acknowledged by the most fastidious to be everything that could be desired, being located in a handsome rural district, about three miles from Dublin, on the south side; the ground (consisting of fourteen statute acres, purchased at a cost of £2300), well elevated, and commanding a beautiful prospect, both mountain and sea. It is capable of accommodating 120 inmates (80 males, 40 females); and, up to the 31st of March last, its actual population was 91 (58 males, 33 females); of whom 47 had been tried for homicide (30 males, 17 females); 27 for violent assaults (21 males, 6 females); 18 for felony, arson, &c. (8 males, 10 females); making a total of 92; but one of the males dying shortly after his admission, left the total number 91 at the above

date. The following extracts will be read with much interest:—

"The great majority of the men are employed on the farm, which, surrounded by a wall not more on an average than six feet in height, with a partial slope at the inner side, has a park-like appearance, whilst those who had previous trades are occupied in the workshop; the females, for the most part, are engaged in the laundry, at needle-work or knitting. The sanitary condition of the establishment has as yet been satisfactory, for, with the exception of a convict who was sent from a southern gaol in a sinking state, there has been no other death. No mechanical coercion is used, the nearest approach to it being front straps for fixing epileptics steadily in their chairs; the attendants, who, generally speaking, were selected for their good conduct elsewhere, being held answerable for the comfort and safety of the patients, and to the present we have reason to be satisfied with them as a body. A small annual increase of wages being dependent on their efficiency and good conduct, they have an additional inducement to be attentive to their respective duties.

"The construction of the buildings themselves is characteristic of a private house, even more than of an ordinary asylum; the windows of ample size, and reaching along the corridors, dormitories, and day-rooms, within a couple of feet of the floor, are totally devoid of bars or grating; and as the interior arrangements, generally speaking, are on the most improved system for similar institutions, the commissioners have carried out at Dundrum the desirable object of divesting the whole concern, as much as possible, of a prison-like appearance; and we are happy to record, that since its opening in October, up to the present date, although the patients enjoy full liberty within the premises, not the slightest personal accident has occurred, or any injury to property beyond the loss of a few panes of glass, a result strongly indicative that insanity, even in its most alarming aspect before the public, requires nothing besides an unceasing vigilance and kindness on the part of attendants for its effectual control. Although, with these facts your Excellency from inspection is fully acquainted, we have taken the liberty to refer to them in this our Report for presentation to Parliament, as we regard the Dundrum Central Asylum for the reception of criminal lunatics, so far as our experience permits us to judge, a successful experiment.

"The dietary is plentiful, and of the best quality; three meals are daily given, and meat six times a week, at a present average per head per annum of little more than £7, an amount which will soon be perceptibly diminished by the produce of the farm in potatoes and vegetables, articles which it is now necessary to purchase. The expenditure for the maintenance of the whole establishment, and of which the items are monthly transmitted from our office to the Commissioners for Auditing Public Accounts, will, we trust, be found

economical, particularly if the charge of keeping up a regular staff be taken into consideration as affecting the individual cost of each lunatic, for, with the same officers, fully a third more patients could be attended to with necessarily a proportional decrease of expense.

"The absolute outlay of the first year, generally speaking, in new undertakings, is greater than subsequently occurs, and this, no doubt, will be the case on the present occasion, in consequence of various expenses incidental to the opening of the institution, such as the conveyance of lunatics from remote gaols and district asylums, the preparation of land for gardening, and other operations, as well as the purchase of implements for the farm and articles for interior use. Without, however, entering into detail as regards the future, we calculate that £17 will cover the annual cost of each patient, including every item and contingency; in other words, assuming 120 as the number of insane (and were they more it would be proportionably cheaper), about £2000, at existing prices, will meet the yearly expenditure of the Dundrum Asylum."

Having given the above details regarding this Institution, which we consider most creditable to the nation, we cannot leave this part of our subject without referring to an editorial article which has appeared in a contemporary journal[a] (whilst we are writing) respecting the treatment of the criminal insane in these countries, in which it is made to appear, that from the cruelty they endured in the ordinary county asylums, a separate institution was indispensable for their accommodation. This is giving a new feature entirely to this point of detail. Hitherto we had thought that *the reason* of all others for removing them from the public hospitals for the insane was the injury which in various ways these establishments suffered, in consequence of their irritating and degrading presence. But not so, it would now appear from the article we are referring to, in which it is sweepingly and without any exception whatever stated, "that the present mode of treating criminal lunatics is disgraceful to a civilized and Christian country." And further, that the criminal lunatic "is confined for life to the cheerless, desolate, and heartburning atmosphere of a public asylum, and thus subjected to the worst description of punishment. He is compelled to herd day and night with the maniac." Now this we consider is a most serious charge, thus deliberately, and in a journal of great influence, brought against the character and general conduct of the public asylums; and without wishing to find fault with the general scope of the article referred to, which is good in intention, we must take one or two excep-

[a] Lancet, September 6, 1851.

tions to it. First, as regards Ireland (included, we presume, in the above heavy censure), where we most positively assert neither criminal nor ordinary insane patients were at any time treated with severity, but, on the contrary, with the utmost consideration and freedom from restraint possible; the district asylums in Ireland, from their first establishment (in 1825, we believe) being held up as models for other countries[a] to copy, as to humanity of treatment in general, and in which neither chains nor iron bars were ever thought of to shackle the limbs or obstruct the reasonable liberty of their inmates, the most perfect freedom from restraint being the standing rule, and restraint the exception, in their daily and hourly management; and in the second place, we conceive that it is anything but fair towards the public hospitals for the insane in these kingdoms to permit it to go abroad that they are "cheerless, desolate, and heartbreaking." From close personal observation, we unhesitatingly deny the correctness of this statement. If they are so to their criminal inmates, equally so are they to the patients in ordinary; but this is not the case, nor is any difference of treatment made, that we are aware of, between the criminal and insane patients, except in Bethlem Hospital, where we admit, though the former is under the immediate eye of Government and specially maintained by the State, they are indifferently enough circumstanced in general, but not harshly treated; and in that hospital, be it remarked, the criminal class is better off than in the other asylums, in one respect at least according to the writer in the *Lancet*, being kept entirely apart, and not "compelled to herd day and night with the maniac," as the article before us so *piteously* states.

We are no advocates for undue severity of surveillance towards the criminal lunatic; but this much we must say, that we fear there is entirely too much of maudlin sensibility exhibited on their behalf: for though in many instances the crimes they have committed have been the result of a diseased *brain*, and for which they could not be held accountable, yet in by far the greater number we fear that a diseased *heart* was at the bottom of their deeds of enormity, and that a system of

[a] In proof of this assertion, we give the following extract from the Parliamentary Report of the Inspectors-General in Ireland, on the District Asylums, for the year 1831, equally satisfactory reports, we may observe, having been made each year: "It is quite gratifying to visit these provincial asylums for the lunatic poor, where they are clothed, fed, employed, and frequently cured; and such moral treatment, *characterized chiefly by humanity*, constant intercourse and inspection, cleanliness and employment, as to fully equal, if not surpass, anything of the kind in Europe."—p. 21.

close discipline should, as a matter of duty, be pursued towards them.

Before finally closing our notice of the Inspectors' Report, we must not omit to take a glance at the portion of it which refers to the several private establishments for the insane in this country. These, we find, amount to fourteen in all, containing an aggregate number of inmates of 446 (251 males and 195 females), the institutions being confined to five counties out of the thirty-two in Ireland, viz., Dublin and the Queen's for the province of Leinster, Armagh for the entire province of Ulster, and Waterford and Cork for the province of Munster, Connaught not possessing a single asylum for private patients.

"The following table presents a summary of the principal statistics connected with these establishments for the year ending 1850.

In Asylums 31st Dec., 1848.			Admitted in 1849 and 1850.			Discharged in 1849 and 1850.												In Asylum, 1851.		
						Cured.			Improved.			Not Cured.			Died.					
Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
245	187	432	159	104	263	56	36	92	57	30	87	14	15	29	26	15	41	251	195	446

"*Social Condition of Patients admitted in* 1849–50:

Married, . 146 | Unmarried, . 117 | Total Admissions, . 263

Army and Navy.	Clerical.	Legal.	Medical.	Merchants, or in Trade.	Clerks and Teachers.	Land-holders.	No Occupation.
20	13	7	7	57	21	20	118

In common with the district hospitals for the insane, the private asylums in Ireland continue to maintain generally the highest character, and to be conducted on the most liberal and humane principles, second to none in any country, their respective proprietors being (with three exceptions, the names of whom are not stated in the Report before us) members of the medical profession, eminent alike for professional skill and private worth, and who, "as a body," the Inspectors emphatically state, "evince a strong disposition to do all that is required of them," than which a higher character could neither be given nor desired.

We have been much pleased to observe that a large and

influential meeting of the Association of Medical Officers of Hospitals for the Insane in Great Britain and Ireland, was held in July last in London. The report of their proceedings is a very interesting and satisfactory document, and we regret that we cannot give it in full. It indicates a determination to proceed in a systematic manner to the accomplishment of every object likely to improve the condition of the insane and the management of asylums. Amongst other matters decided upon at this meeting were the following:

1. The appointment of a committee to examine the existing Lunacy Acts, and to draw up a report to lay before Government indicating ambiguities and defects.

2. The drawing up of a petition to Parliament for establishing a central asylum in England for criminal lunatics, similar to the one at Dundrum, whose excellent conduct under the humane management of Dr. Corbet, its Physician Superintendent, elicited the warmest applause of the whole meeting.

Both of these are movements in the right direction, and there can be little doubt, we think, of all that is desired being speedily accomplished, taken up as the matter has been by a body of men thoroughly conversant with the subject in all its details, and whose practical views merit the best attention of the authorities.

3. A special vote of thanks was passed to Drs. White and Nugent for their courtesy in presenting the Association with a copy of their recent official Report, and for the great improvement they had been instrumental in effecting in Ireland by obtaining the decision of Government in favour of the appointment of none but professional men as the resident superintendents of the district hospitals for the insane. These gentlemen were at the same time unanimously elected members of the Association.

4. The Association visited the new Asylum at Colney Hatch (intended to accommodate from 1000 to 1200 inmates, and upwards, erected at a cost of considerably upwards of a quarter of a million, and inclosing within its walls 120 acres of ground nearly), the County Surrey Asylum, the Hospital for Idiots at Highgate, and Bethlem Hospital, where they were shown an improved window frame, and a bed for wet patients, both being the designs of Dr. Wood the intelligent Resident Physician of the Hospital, and the construction of both of which gave much satisfaction to those present. The members of the Association, before finally separating, were, we perceive, entertained at a conversazione by Dr. Winslow, so eminent as a

psychological physician, and as the editor of the only Journal devoted to the subject in the British islands.

We cannot conclude this condensed summary of the recent meetings of this Association without stating to its praise the great amount of increased comfort and happiness it, as a disinterested and highly influential body of professional men, has been the means of conferring on the insane, and the improvements which it has been so instrumental in effecting in the institutions for their reception. We know of no body of men more deserving of the gratitude of their country, and we feel satisfied that their labours will be duly estimated by all whose good opinion is of any worth.

The Fifth Annual Report of the Commissioners in Lunacy for England and Wales to the Lord Chancellor, dated the 30th June, 1850, is another important public document to be now considered; but before referring to its details, we shall present our readers with an outline of the duties of the six stipendiary Commissioners (three medical and three legal, who each receive £1500 per annum, exclusive of travelling charges), to whom, by the 8 & 9 Vict. c. 100, and the 8 & 9 Vict. c. 126, are confided the visitations of the several asylums in England and Wales: one medical and one legal Commissioner being associated, in order to form a necessary quorum upon every visit.

They have (like our own inspectors) to visit all the asylums, gaols (containing lunatics), hospitals, licensed houses, and the parish and union workhouses, inspect every part of these, and see every insane person therein, and to make whatever inquiries they may deem necessary relative thereto; to take into consideration all proposals and agreements for uniting counties and boroughs, and for erecting and providing asylums, buildings, yards, and other accommodation for pauper lunatics, and all contracts and plans intended to be adopted, as well as the contracts for the maintenance of paupers in licensed houses; and it is their province to inquire into the property of better class lunatics, and to examine into the cases of single lunatics.

One medical and one legal Commissioner have likewise to attend weekly at the office of the General Board in London for the despatch of ordinary business; and every month a meeting is held at the same place for the purpose of considering any important and difficult question that may arise; which meeting must be attended by as many of the Commissioners of

both professions as, without inconvenience to the discharge of their other duties, can do so.

It will be seen, then, from this hasty glance at the labours of the Commissioners, that the office they hold requires constant application, which, we are happy to say, they give to it; all parties interested appear perfectly satisfied, and only wish that they had to do with them alone, free from the interference and espionage of visiting justices, who, for the most part, are both overbearing and self-sufficient.

This, the Commissioners' Fifth Report, is, like its predecessors, plain and practical, and displays a thorough acquaintance with lunacy in all its departments, and the improvements still to be effected in lunatic asylum government. Moreover, the accurate observations, wise suggestions, and gentlemanly conduct which they have always shown, has had, we know, the most beneficial effect on the officers and others in the various establishments throughout the country.

We find that the total number of insane persons in asylums, licensed houses, &c., in England and Wales, on the 1st of January, 1850, amounted to 15,079, and that of this number 3774 were private, and 11,305 pauper patients. There were, moreover, at that date, 264 criminal lunatics confined in the different establishments for the insane. (This does not include Bethlem Hospital, in which there are more than 100 insane criminals, it being, singularly enough, exempt from the Commissioners' jurisdiction.) This fact the Commissioners have again brought under the notice of the Lord Chancellor, and urged the propriety of having distinct accommodation for this class, on the grounds that an effectual security against their escape cannot at present be provided, without restricting the liberty of the other patients with whom they are necessarily associated; that the friends and relatives of patients have frequently brought it under their notice; and that the patients themselves (when conscious of its being the case) have complained of such association as a great and unnecessary aggravation of their calamity. We trust that this appeal, coupled with the endeavours of the Association of Medical Officers for the Insane, may awaken the minds of those in power to the urgency of this matter.

The alterations in the existing Acts are likewise mentioned, and the attention of the Lord Chancellor is particularly directed to the devising of some means of protecting the public from the perils arising from the neglect of friends or parish officers to place lunatics under proper care, the law regarding which is not at present sufficiently stringent.

We think that something is loudly called for to prevent the occurrence of similar cases to that of Lieutenant Robert Pate, whose attack on the Queen must be in the remembrance of all, exciting as it did so much attention in the public mind some twelve months ago; and we hope that the Lord Chancellor, who has been appealed to by the Commissioners, will not further delay having the law so remedied as to prevent as far as possible the recurrence of such unfortunate accidents.

The Commissioners, it appears, after the cessation of the epidemic of Asiatic cholera, made various inquiries as to the sanitary conditions of the different asylums at the time of the outbreak, touching the mode of its attack, progress, and decline, together with some other particulars; and have, at the end of their Report, given a condensed statement of the results. It is not our intention at present to enter minutely into this matter; suffice it to say that the number of patients attacked in the different asylums amounted to 454; the total number of patients in these asylums being 4116. The recoveries were 143, and the deaths 311. It appears to have been more severe in the West York Asylum, there being 133 patients attacked out of 633 the total number in the establishment, 35 of whom recovered, and 98 died, and this although the situation of the asylum was a healthy one, the ventilation good, and nothing defective in regard to cleanliness, neither was the house in a too crowded state; all facts tending to prove that the disease spreads by contagion. The patients attacked in these asylums were, with few exceptions, chronic cases of insanity. In the few recent cases the symptoms of cholera seemed to have supervened on a state of exhaustion following maniacal excitement. The patients were generally in a state of collapse at once, without any premonitory symptoms, nearly three-fourths of the attacked having no premonitory diarrhœa.

In conclusion, we think the Report of the Commissioners is extremely satisfactory, and leads us to expect much good from their labours, supported as they are in all their views by the medical officers of the different hospitals for the insane throughout the country.

The American Journal of Insanity, published quarterly, is a very ably conducted periodical, devoted exclusively to all matters having reference to the superintendence and management of hospitals for the insane, and the advancement and spread of literature in immediate connexion with insanity and its scientific treatment. In its issue for July last we have been much

impressed by a most instructive and well-drawn-up report on the construction of hospitals for the insane, made by the Association of the Medical Superintendents of American Institutions, at its meeting in Philadelphia, in May, 1851, and which we deem of sufficient importance to transcribe in full, its general scope being equally applicable to the eastern as well as the western hemisphere; for the drawing up of this document we conceive our transatlantic brethren engaged in the conduct of hospitals for the insane deserve great credit, their Report evidencing a consummate acquaintance with all the requirements such important establishments should possess, and which we strongly recommend the Commissioners of the Board of Works especially to study with attention, and keep in mind in the erection of all future hospitals for the insane in this country. We wish, however, that the Report had expressed an opinion upon the proper height of a lunatic hospital; we are satisfied, however, that they would agree with us that it should not be more than two stories. We would have been glad also that it had been a little more explicit in section VIII., by stating the maximum number an associated dormitory should contain. Our own view on this point of detail is quite decided, and we believe quite in unison with all who are qualified to give an opinion on the subject, namely, four or six, and no more under any circumstances. Clause v., limiting the greatest number of patients in any one asylum to 250, is entirely to our mind; the "monster asylums" built and being built in England are, we feel satisfied, wrong in principle, and will be found as a consequence bad in practice and results. It is part and parcel of the wretched and miserable economy of the present day, and the time is fully arrived when all who really feel anxious for the utmost benefit being conferred on the insane under hospital treatment, should raise their voice against the spread of so great an evil, one which we grieve much to see is showing itself in Ireland. Witness, for instance, the establishment at Cork, a minor Colney Hatch Asylum in its way, which, though very imposing to the eye, is far from desirable as a remedial institution for the treatment of the insane, who ought not to be congregated, or rather, we might say, herded together in such vast numbers. We are perfectly satisfied that from 200 to 250 is the utmost number any superintendent can take the charge of either with advantage to his patients, or satisfaction and credit to himself. The very circumstance of hundreds upon hundreds of insane persons being under one roof is calculated to produce a most pernicious effect on the minds of many patients themselves, especially those of the desponding

class,—a large proportion of which, be it remembered, is in each asylum,—who fasten upon everything calculated to aggravate depression; and what more likely to do this than the patent fact before their eyes morning, noon, and night, of so many human beings (a regular colony in fact) being the subject of derangement. In large counties, such as Middlesex in England and Cork in Ireland, the more desirable, humane, and curative plan to pursue would be to build separate hospitals in different portions of each county, as has been lately done in Lancashire, where, instead of adding to the only asylum for it near Lancaster, to meet the wants of the county two new ones have recently been built, one at Rainhill, Prescot, about nine miles from Liverpool, which is ably superintended by Dr. Eccleston, the other about two miles from Manchester (its medical superintendent being Mr. Holland); and here we may observe, that two better conducted or more beautifully arranged and circumstanced institutions, as from a personal visit to each we can testify, there could not be. We have only one other remark to make, which is, our entire concurrence with section IV; a view which we, before reading this excellent Report, had already given in our remarks on the Inspector's Report of the District Asylums in Ireland, and which we hope for the future to see fully carried into effect, otherwise our hospitals for the insane will never be as perfect and complete as they should be. The following is the Report referred to:—

"I. Every hospital for the insane should be in the country, not within less than two miles of a large town, and easily accessible at all seasons.

"II. No hospital for the insane, however limited its capacity, should have less than fifty acres of land devoted to gardens and pleasure-grounds for its patients. At least one hundred acres should be possessed by every state hospital, or other institution, for 200 patients, to which number these propositions apply, unless otherwise mentioned.

"III. Means should be provided to raise ten thousand gallons of water daily to reservoirs that will supply the highest parts of the building.

"IV. No hospital should be built without the plan having been first submitted to some physician or physicians who have had charge of a similar establishment, or are practically acquainted with all the details of their arrangements, and received his or their full approbation.

"V. The highest number that can with propriety be treated in one building is 250, while 200 is a preferable maximum.

"VI. All such buildings should be constructed of stone or

brick, have slate or metallic roofs, and as far as possible be made secure from accidents by fire.

"VII. Every hospital having provision for 200 or more patients should have in it at least eight distinct wards for each sex.

"VIII. Each ward should have in it a parlour, a corridor, single lodging-rooms for patients, an associated dormitory communicating with a chamber for two attendants, a clothes-room, a bath-room, a water-closet, a dining-room, a dumb-waiter, and a speaking-tube leading to the kitchen or other central part of the building.

"IX. No apartments should ever be provided for the confinement of patients, or as their lodging rooms, that are not entirely above ground.

"X. No class of rooms should ever be constructed without some kind of window in each, communicating directly with the external atmosphere.

"XI. No chamber for the use of a single patient should ever be less than eight by ten feet, nor should the ceiling of any story occupied by patients be less than twelve feet in height.

"XII. The floors of patients' apartments should always be of wood.

"XIII. The stairways should always be of iron, stone, or other indestructible material, ample in size and number, and easy of ascent, to afford convenient egress in case of accident from fire.

"XIV. A large hospital should consist of a main central building with wings.

"XV. The main central building should contain the offices, receiving-rooms for company, and apartments entirely private for the superintending physician and his family, in case that officer resides in the hospital building.

"XVI. The wings should be so arranged that, if rooms are placed on both sides of a corridor, the corridors should be furnished at both ends with moveable glazed sashes for the free admission of both light and air.

"XVII. The lighting should be by gas, on account of its convenience, cleanliness, safety, and economy [and cheerfulness also, we would add.—Rev.].

"XVIII. The apartments for washing, clothing, &c., should be detached from the hospital building.

"XIX. The drainage should be under ground, and all the inlets to the sewers should be properly secured to prevent offensive emanations.

"XX. All hospitals should be warmed by passing an abundance of pure, fresh air from the external atmosphere over pipes and plates containing steam under low pressure or hot water, the temperature of which at the boiler does not exceed 212° Fahr., and placed in the basement or cellar of the building to be heated.

"XXI. A complete system of forced ventilation, in connexion with the heating, is indispensable to give purity to the air of an hos-

pital for the insane, and no expense that is required to effect this object thoroughly can be deemed either misplaced or injudicious.

"XXII. The boilers for generating steam for warming the building should be in a detached structure, connected with which may be the engine for pumping water, driving the washing apparatus and other machinery.

"XXIII. All water-closets should, as far as possible, be made of indestructible materials, be simple in their arrangement, and have a strong downward ventilation connected with them.

"XXIV. The floors of bath-rooms, water-closets, and basement stories, should, as far as possible, be made of materials that will not absorb moisture.

"XXV. The wards for the most excited class should be constructed with rooms on but one side of a corridor, not less than ten feet wide, the external windows of which should be large, and have pleasant views from them.

"XXVI. Wherever practicable the pleasure-grounds of an hospital for the insane should be surrounded by a substantial wall, so placed as not to be unpleasantly visible from the building."

Dr. Henry Monro's work is divided into two parts, the first consisting of two chapters, in which are contained introductory remarks on the classification of the insane, embracing three divisions: 1. Acute stages of active insanity; 2. Chronic stages of active insanity; 3. The imbecile stage, or the state of wreck after the storm has passed. On the subject of this classification Dr. Monro states as follows:

"From the result of an experience of about six years in the care of an extensive lunatic asylum, during which time I have in vain tried to classify cases to any practical purpose on a more rigid plan than I have mentioned above. It is useless to attempt to paint pictures in the more vivid colours than nature presents, and worse than useless if practical men (or rather, I would say, men obliged to practice) receive these pictures as true representations."

Respecting the corporeal nature of insanity, the author differs from the opinion expressed by Dr. Abercrombie in his work on the Intellectual Powers, where he remarks: "That of the nature and causes of that remarkable condition of the mental faculties which gives rise to the phenomena of insanity, we know nothing: that attempts had been made to refer insanity to disease of the bodily organs, but hitherto without much success; in some instances we are able to trace connexion of this kind, but in a large proportion we can trace no bodily disease."

Into this question Dr. Monro enters at much length, stating that insanity is marked continually by the coincident circumstances of great bodily derangement, and that as this bodily

derangement departs, the mental derangement, in the majority of cases, departs also; and further, that a great hope of treatment is cut off, if we do not look on insanity as having its origin in bodily disease.

We cannot say that our experience leads us to go this length with the author; in innumerable cases all engaged in the treatment of insanity must have observed, that on the supervention of physical disease mental derangement has ceased, and *vice versâ*; we incline rather to coincide in the views of Dr. Abercrombie.

The second chapter of the first part is taken up with the pathology of insanity, in which the mental phenomena of the insane are considered; the cause of these phenomena, in dreaming, somnambulism, abstraction of mind, &c.

In the second part we have two chapters also, in the first of which is discussed the relation the condition of the vascular system in insanity appears to hold to the disease, a subject which is considered under the three heads of inflammatory action, deterioration of the blood, and the blood viewed as a means of mechanical pressure; the last chapter containing a history of various cases where recoveries have been in a marked manner connected with a treatment grounded on the hypothesis adduced, namely, the proper employment of the vital stimulants, air, exercise, diet, &c.

This is a mere outline of Dr. Monro's work, in which, if we find nothing particularly illuminating on the subject to which it is devoted, we see throughout its pages evidences of a highly cultivated mind without any assumption, and an honest spirit of inquiry marked by great zeal and an earnest desire to afford a helping hand to benefit the condition of the insane.

Dr. J. C. Badeley having been appointed to deliver the Lumleian Lectures at the Royal College of Physicians of London, during the present year, selected for his subject, "The Reciprocal Agencies of Mind and Matter, and Insanity," embracing these several points in three lectures, which were published as delivered in the pages of the London Medical Gazette, and subsequently have appeared in the present form. It will be quite unnecessary, therefore, to occupy our space with more than a mere mention of its publication.

In perusing Dr. Badeley's Lectures we are bound to say that we felt much interest, being greatly pleased with their style, composition, and matter, each appearing to us eloquent, well arranged, and instructive; and that, in a generally prac-

tical point of view, we consider he has acquitted himself of his task most creditably, and in a tone and spirit deserving of the highest commendation[a].

The spread of valuable and sound information on a most important subject, and the cause of true humanity, in keeping up a vigilant and constant watch over all and everything that affects the true well-being and comfort of the insane, whether in high or humble life,—for this scourge makes no respect of persons, the monarch on his throne as well as his lowliest subject being alike its victims,—continue to be most ably and zealously provided for and maintained in the pages of our worthy contemporary, the Psychological Journal, under the editorship of Dr. Forbes Winslow, whose name is second to none for eminence in his particular department. The numbers of this periodical for the quarters of April and July respectively are now before us, and, like their predecessors, cannot but be read with interest and profit by the members of the profession generally, and especially by those of it who are actively engaged in the treatment of insanity.

The Eleventh Annual Report of the Crichton Royal Institution for the Insane at Dumfries, for the year 1850, contains everywhere throughout its pages much and varied information in connexion with the general management of that establishment, which, we are happy to see, continues under the experienced superintendence of Dr. Browne. In it are discussed, at much length, the following subjects:—Physical condition of patients; moral condition; delusions of sight, of hearing; periodical delusions; delusion of sight and hearing in connexion; delusions of smell, of taste, of touch; delusive convictions; hereditary delusions; melancholia; choreamania; suicide; abstinence; mania; monomania; moral insanity; imbecility; classification; separation; desire for liberty in the insane; occupation; moral influences; studies; amusements; heating and ventilation, &c., &c. The mere enumeration of the above will be a sufficient proof of the minute manner in which Dr. Browne has

[a] While this sheet was passing through the press we received the melancholy account of the untimely death (on the 22nd of September) of Dr. Badeley. The sad event was occasioned by his having taken an overdose of morphia when suffering from a severe attack of toothache. A family of ten children survive to deplore the above irreparable loss of a distinguished parent, whose recently published lectures have left on record the most incontestible proof of his high attainments as a physician, his varied accomplishments as an elegant scholar, and though last, not least, his truly benevolent and philanthropic feelings as a man.—Ed.

compiled his Report. The total number of patients during the year was 239[a], 32 of whom were dismissed recovered, and 8 improved, making the total of discharges 40. The deaths amounted to 11, 3 males, all of phthisis, and 7 females; 4 of paralysis, and 1 each of apoplexy, bronchitis, diarrhœa, and ileus, respectively. Relative to the staff of the Institution, the Report states that various changes had occurred during the year, "the most important being the appointment of a matron, the choice falling upon a pupil of the *best school* in England (to wit) the Hanwell Asylum."

We do not mean here to discuss the good taste of so naming one institution in particular, nor the judgment of appointing a "pupil," no matter where her pupilage was begun or completed, to the office stated; but we think this is the proper place to record again our deliberate conviction that matrons especially, and subordinate officers generally, in hospitals for the insane, should be completely and entirely under the control and direction of the physician superintendent, and not be permitted to act independently of that officer, as we know is too often attempted, and particularly by the matrons, to the great detriment of the welfare of our public asylums. The only way in which the due and wholesome restraint and discipline of all secondary officials, from the assistant medical officer down to the assistant attendants upon patients, can be accomplished, will be by placing their appointment in the hands of the superintendent physician, making him responsible for their efficiency, in common with the good working of the entire institution[b].

The County Hospital for the Insane of Suffolk contained for the year ended 1850 an aggregate population of 252 inmates, 113 of whom we find by the Report of that year were males, and 139 females. The number of admissions for the year was 82 (36 males, 46 females); and those discharged cured during the year amounted to 49 (21 males and 28 females); discharged relieved, 3 (2 males, 1 female); died, 29 (17 males and 12 females). The total number under treatment during the year was 335, 155 of whom were males, and 180 females.

[a] The sexes of the aggregate of patients, which are not distinguished in this Report, would be desirable as a general rule always to do in such documents.

[b] By the 8 & 9 Vict. c. 107, the Act for the establishing of a Central Criminal Asylum in Ireland, in sec. ix. authority is given to the Lord Lieutenant to exercise the patronage of "nominating and appointing," (besides the superior officers,) even the "keepers and servants"! of that institution.

Of the causes of death, we find 9 enumerated under the head of debility, in the forms of maniacal exhaustion, gradual exhaustion, &c.; 6 of epilepsy; 5 of pulmonary diseases; 3 of old age; 2 of paralysis; 2 of visceral disease; 1 each of dropsy, hematemesis, apoplexy, and scrofula, respectively. On the subject of the arbitrary and unprofessional distinction of "incurable" cases, Dr. Kirkman, the Resident Physician of this Institution, makes the following very just remarks:

"The nominal distinction of *incurable* should not lead to the relaxation of effort, nor should it suppress the encouragement of hope. However increasingly unfavourable the continuance of the malady beyond a definite although variable period may be, favourable results do occasionally reward untiring efforts to obtain them. We have only just closed an interesting correspondence with a discharged patient, who left perfectly well in 1847, and has continued so in different situations. She had spent nearly seventeen years in this house, and was at times very violent."

This is a most consolatory and gratifying statement, showing that the mere lapse of time alone is no reason for giving up hope of a favourable issue even in cases apparently the most intractable and unpromising, either from their long continuance or violence of symptoms. We consider the publication of *notabilia* of the above kind of a practical nature, of unspeakable value in the stated reports of our hospitals for the insane, and we would desire to see it more fully carried out. Dr. Kirkman relates the particulars of the case of a female suicidally disposed, and who talked generally in a most desponding manner on religious subjects, her conviction being that she had "sinned beyond mercy." Though a most unpromising subject, she ultimately recovered, and was received back into her former service, performing her duties in the most satisfactory manner. After quoting the opinion of the late eminent Dr. Cheyne of this city, touching "the placing of divine truth" before such patients, Dr. Kirkman goes on to say:—

"It is here, indeed, that the great advantage of *domestic* religious instruction is felt; that as the process of bodily relief gradually goes on, by a watchful and judicious conveyance the mental progress may be as gradually promoted."

We quite agree with Dr. Kirkman and Dr. Cheyne in this view of the matter, and feel called upon here to state our belief that it is one of the monomanias of the present day, the extremes to which the exercise of religion is carried *professionally* in our lunatic institutions. One, or at the utmost two, discreet and judicious official chaplains, to administer spiritual

comfort and advice in those cases deemed by the resident medical superintendent not likely to be prejudiced, may, perhaps, be right and proper, but in institutions where there are several entirely different religious denominations, all of whom would necessarily require a distinct chaplain,—three or four, perhaps, according to the particular locality,—we esteem that it would be a positive evil, and more likely to injure than serve the patients. The very fact of three or four different kinds of religious services being performed each Sunday by three or four different clergymen, under the one roof, would, in a common-sense view of the matter, be calculated to cause no small excitement even amongst the sane, to say nothing of that community being composed of insane individuals, and that the Sunday, instead of being one of rest, would, under such circumstances, become of more than ordinary disquietude.

Dr. Kirkman again reiterates his former statements against hospitals for the insane being made the abodes of criminal lunatics, referring to the provision made for them in this country, and expressing a hope that a similar one shall soon be founded in the sister kingdom. On the subject of the evil consequences of intemperance, and its being a fruitful source of insanity in the very worst forms, he observes:—

"That the evil of intemperance to the *individual* is the very least of its consequences, the real and great injury falls upon future generations; and that there is no single cause which produces so many idiots, and so much mental and bodily derangement in children, as the drunken iniquity of their parents; that one of their patients had been re-admitted for the sixth time, whose life since 1837 had been actually passed between the sober sanity of the asylum, and the drunken mania of unlicensed violence when out of it."

It would be of the greatest advantage were an institution established in these countries, as in the States of America, for the reformation of drunkards. Dr. Browne of Dumfries Asylum long since ably advocated such, and has lately again, we are pleased to find, written some excellent papers on the subject: we hope that he and others equally competent will continue to agitate this most important matter, until it be practically taken up by the *sober* portion of the community, and an hospital for the cure of drunkards be gotten into full operation; the good effects it would be productive of would be incalculable.

The Hospital for the Insane for the County of Somerset, at Wells, is a comparatively new Institution, having been in ope-

ration for three years only; it was built for the accommodation of 350 patients. According to the last published Report for the year ended December 31, 1850, there were already 319 patients in the Hospital, being within 31 of the number for which the Institution was built, a number which there was every probability would not only be shortly reached but exceeded, and thus require that additional accommodation should be provided, so that not long hence another overgrown establishment of insanity will be added to those of which there are at present too many in the country. Dr. Boyd is the Physician Superintendent of this Institution, and, judging from the excellent and practical character of his Third Report, we feel well assured that he is admirably calculated for the important post he has been filling since the opening of the Institution.

It may be recollected that in our last Review on Insanity the subject of admitting patients above the rank of mere paupers[a] into public asylums was considered and strongly objected to. We are glad to find that our views on this important point of detail are supported by so sound an authority as Dr. Boyd, who remarks on this subject as follows:—

"A few such cases have been admitted here through the parishes, but it is generally found that these patients, as well as those of the completely indigent educated class, being associated in an asylum with paupers (when they have sufficient reason left to distinguish any difference), is attended with evil consequences to both parties, as those educated persons, and others who at one time were better off, are apt to become discontented and mischievous, and prone to find fault with the food, clothing, &c., provided for the labouring class; and being unfit to work themselves, their idleness becomes a subject of jealousy or murmuring on the part of those to whom labour is a second nature."

These remarks speak for themselves, and make it unnecessary for us to say more than that the idea of associating the two classes together is so palpably opposed to all common sense, we cannot but wonder at its adoption having been thought of under any circumstances. A separate institution, as Dr. Boyd suggests, for a class of persons whose friends could pay a moderate sum towards their support is much needed, and we hope that the day is not far off when we shall see an institution of the kind in full operation. Dr. Boyd writes strongly and much to the point against the existing custom in England of

[a] This term we think objectionable; it is common, however, in England; but in Ireland the designation for the same class is "insane poor," which is much to be preferred.

confining criminal lunatics with the general patients, showing how adverse it is to the well-being of institutions which in no respect should be viewed in the light of gaols, but which they are virtually made by so pernicious a practice. Let each gentleman in charge of an asylum, together with the visiting authorities, determine to act vigorously in the matter, and it will soon be found that this "plague spot" will be as effectually removed as it has been in Ireland by a suitable criminal lunatic asylum being established and supported by the State. There is a very interesting section in this Report of Dr. Boyd's on the medical treatment of epilepsy and its complications, which we think well deserving of attention, and would willingly transcribe into our pages did our space permit. Tincture of Sumbul, which has been lately recommended in this disorder, he states he has used with benefit in a severe chronic case, the fits diminishing in frequency, and ultimately ceasing almost entirely. We have had no experience of this preparation in particular in epilepsy; we have tried, however, turpentine, as recommended by the late Dr. Edward Percival, and with more satisfactory results than any other remedy[a]. On the subject of necroscopic examinations of the bodies of epileptics and the insane generally, the following remarks of Dr. Boyd are, we think, sound and sensible:—

"No doubt changes from the ordinary state are found frequently in the skull, in the membranes of the brain and spinal cord, and in the structure of these nervous centres themselves, in cases of epilepsy; but the same changes are found in the bodies of those who had never been the subjects of epilepsy. The same is also the case with respect to insanity. The changes which are ordinarily described as found in the brains of the insane I have again and again observed in the brains of persons who had never been insane."

Some notice is taken of general paralysis, several fatal cases of which had occurred during the year, so many as 11 (7 males, and 4 females), the morbid changes observed being, wasting of the spinal cord, inflammation with softening and induration of its substance, adhesions and thickening of its membranes; similar changes being discovered in the brain and its membranes. The total of deaths during the year was 34 (21 males, 13 females). In the obituary portion of his Report Dr. Boyd enters very minutely into details which we are unable to give even the shortest summary of, or of the

[a] Dr Edward Percival's cases of epilepsy complicated with mania, treated with turpentine, will be found fully reported in the first volume of the Dublin Hospital Reports, page 161.

several statistical tables that follow; we cannot, however, close our notice of this Report without again commending it, and suggesting it as one worthy of imitation; our ideas on this head being, that the Reports emanating from hospitals for the insane should be stamped with more of a professional character than they usually are, a good selection of cases and observations on disputed or unsettled points of practice being of much more importance to the profession, whether engaged in the treatment of insanity exclusively or not, than mere statements of pounds, shillings, and pence, and the great saving effected in this branch, and the large profits realized in the other; how one acre of ground in this asylum was made to produce as much as two in another; how the females worked so laboriously and unremittingly in the wash-house as to be not only able to laundry for the whole of their own institution but for some adjoining gaol besides,—all which may be very flatteringly received by visiting justices and governors, and all very proper in their own place, but not exactly, we think, suitable to be made the primary objects of a Report emanating from such important institutions as hospitals for the insane have now become.

According to the Annual Report for 1850 of Mr. Ley, the Medical Superintendent of the Hospital for the Insane of the Counties of Oxford and Berks, situated at Littlemore near Oxford, the total number of patients treated during the year amounted to 406 (175 males, 231 females); the discharges being 60, viz., discharged recovered 56 (24 males, 32 females); ditto relieved 4 (2 males, 2 females); and the deaths to 20 (13 males, 7 females); leaving under treatment at the close of the year 326 (136 males, 190 females). There is a vast mass of information, statistical, financial, and economical, in this Report (an over-dose, we would say, of the two latter), which we cannot afford space to give even an outline of, though all evidently drawn up with great labour and extreme minuteness, very satisfactory, of course, to the local authorities, but not so to the professional reader. In glancing over the "payments" made for the year we were much surprised to find that the Medical Superintendent's salary was £250 only, while that of the "Clerk of the Visiting Justices" was £210,—a disproportionate rate of remuneration, which we scarcely expected to find in the sister kingdom; a difference of but £40 in the salaries of an educated professional man on whom devolves all the most responsible duties of the Institution, and a mere clerk to the visitors! We hope that this is an exception to

the general rule that prevails in England. We also discover that the sum of £50 3*s*. 3*d*. was paid for "tobacco and snuff"!

The Report of the West York Pauper Lunatic Asylum at Wakefield, by Dr. Corsellis, its resident medical officer, we have perused with much pleasure and interest. This is another of the leviathan asylums in the sister country, its population numbering, at the close of the year, 575 (269 males, 306 females).

The Wakefield Asylum is, we believe, amongst the longest established county asylums in England, if not the longest. The immediate predecessor of its present eminent and experienced director was the late celebrated Dr., afterwards Sir William, Ellis, who received the honour of knighthood at the hands of George III., for the great improvements he had been the first to make in the general and moral management of the insane, by the introduction of extensive employment of various descriptions, especially of the agricultural kind, and for his extreme humanity and kindness in their general treatment,—a system which his successor, Dr. Corsellis, has diligently pursued during his entire incumbency, and which has gained for the Institution a character second to none in the three kingdoms for the mild, successful, and judicious treatment of its inmates. This system, too, of humanity has been noiselessly pursued; for though the most entire freedom possible from restraint has been here invariably practiced, yet no peculiar claim has been made or thought of for reward from the public at large, as now-a-days seems to have gotten into fashion by the *soi-disant* tectotal non-restraint men, who are managing to reap all the eclat and substantial honours for that on which they "bestowed no labour."

There are several most interesting points in this Report worthy, could we afford space, of being noticed. We cannot, however, refrain from giving a few particulars of one of the many very interesting and instructive cases which are contained: it is that of a boy twelve years of age, of singular appearance, a congenital idiot, said to have been left in a cottage by some gipsies, to whom he belonged. He is unable to speak, and in appearance and habits partakes more of the brute than the human species, expressing pleasure or disapprobation by a wild cry, or by flapping his arms like the wings of a bird. One peculiarity is, that he ruminates his food. When eating, his food is bolted or rapidly swallowed without mastication. As soon as the meal is finished rumination commences. A portion of food is raised from the stomach, sometimes by a visible effort, but

not always accompanied by eructation; the morsel is then deliberately chewed and re-swallowed, and so on, the process lasting fifteen minutes or more.

Dr. Corsellis, in referring to the criminal insane in the asylum, observes, " the presence of a burglar or a murderer is felt as a degradation" by the other patients, who are often kept in the most prejudicial state of excitement by such improper association, but which cannot be avoided.

With reference to the dreadful outbreak of cholera in this Asylum in 1849, some very interesting matters are stated. It spread with the greatest virulence in the most airy, pleasant, and healthful wards: on one day the deaths amounted to 19! the total being 98 between the 22nd of September and the 27th of November. It is stated as rather a remarkable fact, that only of one, and that the last victim of this large number who died, could the smallest anticipation be entertained of mental restoration. Dr. Corsellis bears high testimony to the zeal and liberality displayed by the local officials during the continuance of this dreadful visitation, no cause for which in particular, even after the most minute and searching investigations by the most competent parties, could be discovered. We can only now further observe, that the patients under treatment during the year amounted to 777 (374 males, 403 females), 285 of whom (149 males, 136 females) were new admissions. Those discharged as cured, &c., amounted to 121 (59 males, 62 females); the deaths to 81 (46 males, 35 females), the cause of the largest number of which was paralysis (15); the next, old age (12); then general exhaustion (8), &c. &c. The year's expenditure amounted to £10,904 14*s.* 9*d.*; including £52 10*s.* for tobacco! The weekly charge for each patient during the current year was fixed at 7*s.*

The Thirty-seventh Annual Report of the Glasgow Royal Asylum for Lunatics for the year 1850 is a very ably drawn-up document, reflecting much credit on Dr. Mackintosh, its Physician Superintendent. This Institution is one of very large dimensions, giving accommodation to 425 inmates (227 males, 198 females), the number remaining on the books on the 31st of December, 1850. The cases admitted during the year amounted to 393 (194 males, 199 females), making the total under treatment 880 (459 males, 421 females). Those dismissed cured amounted to 171 (84 males, 87 females); ditto, relieved, 243 (132 males, 111 females). This is the largest number we have ever observed under this heading in any asylum in the three kingdoms, and an explanation for

which we searched for in the Report, but could find none. The mortality list was, on the other hand, unusually low, being but 41 altogether (16 males, 25 females), which was only 5 per cent. on the total number under treatment, a death per-centage as remarkably and unaccountably small as the "dismissed relieved" was large. In Dr. Mackintosh's forthcoming Report for 1851, we take leave to suggest that he should give some further explanation on the above matter of detail, which we confess has puzzled us not a little. Amongst the assigned causes of insanity in the cases admitted during the year, we have observed 6 (1 male, 5 females) under the head of "bad temper," which, though likely enough perhaps to dethrone reason, we do not recollect to have seen before given as a cause. It is a consolation, however, to find that the male sex stands at so low a figure under that category; but it is also to be lamented that not a single case of recovery appears under it in the table (No. 5) showing the causes of insanity in those cured. Let the "bad-tempered" beware! No fewer than 71 (42 males, 29 females) we find of the admissions arose from "intemperance," which would appear to be a "besetting sin" in Glasgow, and a too fruitful source of derangement. We were curious to see how the tobacco account stood in this asylum, but unfortunately our curiosity was not to be gratified, no separate charge appearing under this head in the "receipts and disbursements" for the year. We were glad, however, in our search to find that the salary of the Physician Superintendent is "five hundred per annum," something approaching to a fitting remuneration for such an officer.

The Report of the County Lunatic Asylum near Gloucester for the year 1850, Dr. Williams, Resident Physician and Superintendent, is a strictly statistical and financial one, four leaves of it being devoted to the former, which contains fourteen tables, and seven to the latter, so that to judge from these proportions, the inference to be drawn would naturally be that the pounds, shillings, and pence department of the Institution was considered to be one of no small importance. With the latter we have no further concern, except as far as regards salaries of the medical officers, which are, for the Superintendent, with house, coals, candles, &c., without board, £300, and for the Assistant Medical Officer, with board, £50. Tobacco and snuff costs £59 4*s*. 1½*d*. for the year!

According to the statistical portion of the Report, there appears to have been 404 (179 males, 225 females) under treatment during the year, divided into 1st, 2nd, and 3rd class pa-

tients; the discharges under the several heads of recovered, relieved, on trial, &c., amounting to 68 (26 males, 42 females), and the deaths to 36 (24 males, 12 females), which left in the house at the close of the year 300 (130 males, 170 females). The average number in the house each week in the year was 298; average number daily employed, 134. The total number admitted since the opening of the Institution in 1823 was 2479, the total of recoveries being 1290, and of deaths 421. The several tables are drawn up with much clearness, and so far a very full and satisfactory statistical account is given by Dr. Williams of the medical condition and state of his well-conducted institution.

The Eighteenth Annual Report of the Carlow District Lunatic Asylum for the present year, drawn up by Dr. White, the Physician Superintendent of that Institution, contains its usual amount of satisfactory information, statistical and otherwise. During the past year numerous useful changes, Dr. White states, have been accomplished in the Institution, which have greatly improved its whole appearance, besides adding much to the comfort and advantage of the inmates. Dr. White, on the subject of the improvements effected, says:—

"Several alterations have been made in the details of the institution, alterations which, though perhaps slight in themselves, individually considered, yet, collectively taken, contribute much to the good order and happiness of the inmates. Gas has been introduced into the establishment; its brilliancy will, I hope, tend to remove the drowsiness which most lunatics feel in the evening, and induce many of them to remain up conversing around the fires, instead of stealing off to their beds, as they now endeavour to do."

The dietary, we are glad to find, has been improved since last year, so far as increasing the quantity of meat "in the soup," (yet no meat *per se*) by fifty per cent. We think that the bread for males at the same meal might also have been increased from 10⅔oz. (a remarkably nice fractional division) to three-quarters of a pound at least, which would be quite little enough, especially, too, when we see that its only adjunct is "a pint of mixed milk," and this cold and rather meagre dinner-fare, supplied so many as four days in the week. The supper meal as it stands (bread and "mixed" milk), may do very well for the warm summer months, but during the autumnal and winter seasons porridge would be a much more comfortable final meal for the patients, and the expense little if anything more. Dr. White makes some sensible observations respecting the accu-

mulation of "incurable (chronic?) patients" in the district asylums; but for our own part we do not see how this evil can be better remedied than in the manner suggested in our observations on the Inspectors' Report. A total clearing out of the incurable cases (or chronic, as we prefer calling them) in the asylums would neither be desirable nor just. The total expenditure incurred in this Institution for the last year was £2869 18*s.* 9*d.*, and the profits arising from the farm and garden amounted to £80 5*s.* 8*d.* Under the head of payments we again regret observing that a sum of £26 2*s.* 5*d.* was expended in "tobacco and snuff"! This is an outlay of the public money in lunatic asylums generally (for it is not confined to one only) which we candidly confess is not to our mind, and which we would rejoice to see given up altogether. To deprive the inmates of comforts of a suitable kind, we need scarcely say, is not our object. We would rather add to them in every possible way, but certainly not by indulging them to their hurt, moral, mental, and physical, by serving out to them that disgusting and pernicious weed, tobacco, in any form. The total of patients treated during the year in this Institution, we find, was 271 (143 males, 128 females); the discharged as recovered, &c., 51 (25 males, 26 females); and the deaths 23 (11 males, 12 females). The largest number of deaths in the table of causes was from phthisis 8 (2 males, and 6 females), the entire number who died being 23. The number of patients daily employed at various useful occupations, viz., gardening and farming, tailoring, mason-work, painting, washing, &c., amounted to 158, out of an average population of 200, which was a large proportion to be thus satisfactorily engaged. The account of work executed by the inmates is also very creditable. As to the state of education of the 70 patients admitted during the year the Report gives the following particulars: well educated 4 (3 males, 1 female); readers and writers 33 (14 males, 19 females); readers only 9 (4 males, 5 females); uneducated and unknown 24 (12 of each sex.

Dr. Flynn, in his last Report of the Clonmel District Asylum, gives data for a very satisfactory estimate being formed of its general condition. The expenditure, it appeared, had been considerably curtailed, without infringing in any degree upon the comforts (not even on tobacco and snuff, which cost the comparatively large sum of £22 6*s.* 7*d.*!) of the patients; the cures, coupled with the amount of illness and mortality,

being referred to as proofs of this. The discharged cured amounted to 21, of whom 13 were males and 8 females; the deaths to 7 (4 males, 3 females), an exceedingly small mortality amongst the total under treatment during the year, which was 167 (82 males, 85 females). The new admissions reported for the year are set down as 39, 18 being males and 21 females. Remained under treatment, on 31st March, 1851, 132 (62 males, 70 females). State of education of patients in Asylum, March 31st, 1851: can read only 26 (12 males, 14 females); can read and write 52 (35 males, 17 females); can neither read nor write 54 (15 males, 39 females); speak Irish 82 (40 males, 42 females). Religion: Established Church 12 (5 males, 7 females); Roman Catholics 120 (59 males, 63 females). The supposed curable patients were 68 (31 males, 37 females); ditto, incurable 64 (31 males, 33 females); total 132. Light works, such as Chambers' Journal, Eliza Cook's Journal, Family Herald, Household Words, &c. &c., are supplied to the reading patients; "Prayer-books and Testaments are also carefully afforded, and should illness, or other causes, *seem* to *demand* their *attendance*, the *gratuitous* services of a Protestant, Roman Catholic, or Presbyterian clergyman, have been at all times most cheerfully afforded." This paragraph (the Italics are our own) of Dr. Flynn's judiciously and well-drawn-up Report has afforded us infinite pleasure; it is, we conceive, exactly what is suited in the way of religious instruction *from without* in an hospital for the insane, and we rejoice to see that the Institution over which Dr. Flynn presides with so much humanity and consideration is thus so happily circumstanced.

The Maryborough District Lunatic Asylum is one of the three asylums referred to in the Inspectors' Report, in which a resident physician, Dr. Burton, had recently been appointed by the Lord Lieutenant. The Annual Report now before us is its Eighteenth, being from the 1st of April, 1850, to the 31st March, 1851. Its form, we consider, might with much advantage be changed to the usual pamphlet size, which would be more convenient in many respects. The course of events during the year in this Institution was characterized by nothing more particularly new than what has been referred to in the above professional appointment. At the close of the year (31st March, 1851) there remained under treatment 195 inmates (98 males, 97 females); 55 of the males were the subjects of mania; 9 of melancholia; 5 of epilepsy; 25 of de-

mentia; 2 of idiocy; and 2 were classed as criminal lunatics not insane. Total males, 98. The females, under the same classification, with the exception of criminals of which there were none, present great similarity of numbers, being respectively 56, 13, 5, 21, and 2. Total, 97. Those discharged, "cured, or relieved," during the year, amounted to 29 (11 males, 18 females); removed unrelieved 11 (5 males, 6 females); died 16 (10 males, 6 females). The supposed curable patients remaining in the Asylum, at the above date, were 80 (42 males, 38 females); and incurable, 112 (54 males, 58 females). The causes of death were as follows:—Phthisis, 6; chronic dysentery, 5; apoplexy supervening on chronic paralysis, 2; acute dysentery, inflammation of the lungs, and of the liver, 1 each; total 16 (sexes not stated in this classification). The majority of the deaths (10) occurred in the months of February, March, and April, which are usually, we believe, the most trying periods of the year to the insane. There is much truth in the following extract, a subject upon which we made some remarks in our last Review, and which we conceive is deserving of the best attention of those whose duty it is to provide a remedy against what can be considered nothing less than an evil, and a great one too, all the asylums feeling its inconvenience more or less:

"There is but too much reason to apprehend that the opinion prevails among the poorer classes, that it is to the gaols they are to turn to obtain relief from the presence of insane relatives. While so much facility shall be afforded for the committal to prison of persons suffering from insanity, it is not to be expected that relatives will be likely to incur the trouble of going through the forms necessary as preliminary to obtaining admission into the asylum, and as a consequence the gaols will be resorted to in the first instance, from whence the more incurable cases will be transferred to the asylum, with the disease probably increased, perhaps confirmed, by the disadvantageous circumstances under which they had been placed while in gaol. It would seem that nothing short of legislative enactment is sufficient to check this evil, for it is plain that friends will apply, and that magistrates will not refuse to open the prison as an asylum for the insane, instead of endeavouring to induce parties to make proper efforts to place patients in the lunatic asylum of the district."

There are no entirely padded rooms in this asylum, but there are padded doors, which are found to answer every purpose nearly as well, viz., for noisy and door-striking patients; and indeed it appears to us that for the greater number of cases of this kind padded doors are quite sufficient. Mention

is made of a new description of bed for epileptics in use in the Asylum, which has been found to answer the purpose remarkably well, and from the description given of it, we would infer much satisfaction to arise from its general use. It consists of strong canvass, swung close to the floor, on chains attached to eyes of iron, secured into the wall; a mattress is laid over the canvass, with suitable bed-clothes; the head of the bed is elevated nine inches higher than the foot, a plan stated to have been adopted with advantage in all the ordinary bedsteads.

From Dr. Stewart's Report of the Belfast District Lunatic Asylum we learn that the extension of that building for the further accommodation of patients has at last been finally agreed to by the Government authorities, after an agitation on the subject on the part of the local Board of several years. At the end of the year (31st March, 1851) it had within its walls 269 (150 males, 119 females). The additional buildings will enable 80 more to be received, which will make an aggregate amount in round numbers of 350. This extension we consider is deeply to be deplored; but as we have already stated our views on this subject in other parts of this Review, we shall dismiss it here by merely observing that in two such densely populated counties as are embraced in this district (Antrim and Down), containing an aggregate population of upwards of 700,000, we think an insane hospital in each should most properly be located, and which ultimately, we feel satisfied, will have to be done. In fact, there are very few counties in Ireland in which there would not be a sufficient number of insane persons to fill a moderately-sized establishment for each.

The total treated during the year in this asylum was 408 (216 males, 192 females); of whom were discharged recovered 81 (33 males, 48 females); discharged relieved 29 (11 males, 18 females); the deaths amounting to 29 (22 males, 7 females); which left on the books at the close of the year 269 (150 males, 119 females). 30 of the admissions were of a suicidal character, 14 having made actual attempts at self-destruction before admission, and 16 having a decided propensity in that way. The homicidally-disposed cases amounted to 7. The general treatment of the patients, the Report states,

> "Consists as usual in employing them as largely as possible in such avocations as are most agreeable to their own feelings, previous habits and pursuits, besides providing them with every reasonable indulgence."

On the subject of using mechanical restraint it remarks:—

"The cases of turbulent and destructively-disposed patients, requiring to be placed under mechanical restraint, with the humane view alone of protecting and preventing them from inflicting injury upon themselves or others, were comparatively few as usual."

The Report of the Royal Edinburgh Asylum for the Insane, for the year 1850, Dr. Skae, chief Medical Officer, is a very interesting and most instructive professional document. The general results of the year were as follow:—

	Males.	Females.	Total.
Number of inmates at the close of 1849, ...	224	251	475
Admitted during the year 1850, .	126	127	253
Total under treatment, ...	350	378	728
Discharged cured and uncured, .	78	88	166
Died, ...	26	38	64
Total number at the close of 1850, .	246	252	498

In the table (page 24) of the causes of disease in those admitted, we find that considerably the largest number is under the head of "intemperance," viz. 48 (34 males, 14 females); and the next, "religious excitement," amounting to 18 (12 males, 6 females). "The Queen's visit to Scotland," we perceive, is assigned as a cause in 2 (males), and the "Papal Aggression," 1 (female). The greatest number of deaths occurred from phthisis pulmonalis, viz. 18 (3 males, 15 females), which strikes us as being a very large mortality from this one cause; and the next largest from general paralysis, 15 (13 males, 2 females). Dysentery produced 9 (3 males, 6 females); pleuropneumonia 6 (3 males, 3 females), &c. &c. Three of the patients died within a week, and six within a month of their admission. Dr. Skae gives several interesting particulars of the *post mortem* examinations which were made in 31 cases. In 10, we find, there was softening of the substance of the brain, and in 9, congestion of the membranes. No morbid appearances were observed in 4, viz., 2 mania, 1 monomania, 1 epilepsy. The "ordinary" expenditure of the year amounted to £12,193 6*s.* 2½*d.*, in which no allowance appears for "tobacco."

The North Wales Asylum, at Denbigh, Dr. Jones, Superintendent, commenced receiving patients in 1848. The Report

for 1850, shows that there were a total of 183 (89 males, 95 females) under treatment during the year, including the admissions, which amounted to 76 (42 males, 34 females); the discharged cured to 28 (12 males, 16 females); ditto, improved, 7 (3 males, 4 females); ditto, unimproved, 3 (2 males, 1 female); died 10 (5 males, 5 females); remaining, 135 (66 males, 69 females). The causes of death were apoplexy 3; atrophy 2; phthisis 2; bronchitis, diarrhœa, and exhaustion, 1 each. The total expenditure was £5231 12*s.* 3½*d.*; the tobacco and snuff portion of it being £28 12*s.* 2½*d.*!

The Bethlem Hospital Report for 1850, Dr. William Wood, Resident Physician, states that the number of curable patients admitted during the year was 344, consisting of 135 males and 209 females; that the number of these remaining at the close of 1849 was 209, which together made more than an average number of curable patients. The cured during the year amounted to 197 (74 males, 123 females), being 26 more than the preceding year; 82 (26 males, 56 females) were discharged uncured. The total deaths (including curable, incurable, and criminal inmates), amounted to 41 (29 males, 12 females), which considerably exceeded the usual average, and which is accounted for in part from the circumstance of several patients coming into the hospital in a dying state, a grievance which, we perceive, is very generally alluded to and complained of by the medical officers of public asylums. The general health, however, was very good during the year. Fourteen of the deaths occurred within five weeks after admission, four were chronic cases and a great number of years in the house, one being twenty-nine years an inmate, another twenty-six, and a criminal patient, after thirty years' residence within the walls of the Hospital. There are very minute statistical details in this Report, and all apparently prepared with every accuracy. Under the head of General Treatment the Report states that many indulgences had been introduced during the past year: an improved dietary had given great satisfaction, which we can very well conceive; fire-places had been placed in the dining-rooms; the introduction of gas had added much to the cheerfulness of the Hospital, which, we must say, it much needed, the galleries being very dingy and dull even in the brightest daylight. An improved window is stated to have been introduced also, which we perceive has been approvingly alluded to in the Report of the Association of Medical Officers of Hospitals for the Insane, and for which the inventive powers, it would seem,

of Dr. Wood, the able Resident Medical Officer of the Hospital, may be thanked.

It is a matter of much satisfaction to find that at last some changes are being effected in the interior of Bethlem; it is a century nearly behind the present age, and stirring hands, intelligent heads, and humane hearts, will all be required to be set briskly at work to bring it up to anything like what the Metropolitan Asylum for the Insane should be. A foreigner of distinction, we were informed, had lately been visiting Bethlem, and after going through its entire length and breadth, he was asked, before taking his leave, to record his visit, stating his opinion of the Institution; this he did after some little hesitation, simply writing, this is a very fine building *outside.* We do not vouch for the accuracy of this, we give it as we heard it, but nothing could have been more laconically or truly descriptive of Bethlem. Its accommodation, especially for its criminal inmates, is most indifferent, but the Government alone is to be censured for this, and not the authorities of the Hospital. It appears that there are 106 (86 males, 19 females) of this class *incarcerated* in Bethlem. The Dundrum Central Asylum has put England to shame for her apathy, in regard of making suitable provision for her criminal lunatics, and so long permitting their presence to interfere with the character and good working of the public asylums throughout the kingdom.

On the subject of restraint the medical officers of this hospital, in the Report before us, thus express themselves:—

"The average number under restraint has been very small indeed. It has amounted only to $\frac{37}{365}$ per diem, being about one-half of the preceding year, and a thirtieth part of what it was seven years ago. Still it is occasionally unavoidable, but it is only employed to prevent greater evils. Only four patients have been placed under any mechanical restraint in the course of the whole year, and two of these arose from surgical necessity."

We like the openness and common honesty of the above, which is very refreshing where so much want of candour has been practised by others.

As we were about to close this Review we received the three last pamphlets on our list. The Society named is, we perceive, supported by voluntary subscription, and was founded in 1845 for the protection of the British subject from unjust confinement on the grounds of mental derangement, and for the redress of persons so confined; also, for the protection

of all persons confined as lunatic patients, from cruel and improper treatment. The Report enters very largely into various matters connected with the Society's objects, and has attached to it a petition to Parliament, setting forth the several abuses which require the interference of the legislature to correct in the management of private asylums for the insane, embodying in it a statement which has surprised us not a little, as having been made by Lord Ashley (now Earl Shaftesbury), Chairman of the Commissioners in Lunacy, in his place in Parliament last session, when speaking on the bill introduced by Mr. Lacy, M.P., for placing religious houses under the surveillance of the civil authority. He is stated to have said "that the Act passed in the year 1845, intituled 'An Act for Regulating the Care and Treatment of Lunatics,' he did not hesitate to say, was most defective, and that the inspection of private asylums was not only imperfect, but was performed most unwillingly." Doubtless, if this be the state of the law in England regarding private asylums, and this, after so much time was spent in discussing its provisions when before Parliament, and so recently, too, as in 1845, another session should not be permitted to elapse without having it amended,—and for prominently bringing forward the defects of which this Society deserves much credit.

The Summary of Suggestions contains thirty-five propositions with reference to additions to the law of lunacy, authenticated by the signature of Purnell B. Purnell, County Chairman of the Court of Quarter Sessions for Gloucestershire, the necessity or otherwise of which we need not here discuss, but simply state the fact of such being recommended for adoption.

"The Letter," signed by a suitor in Chancery, it will be sufficient to remark, relates to matters regarding Committees of Estate and of Person, and to the heavy expenses chargeable on the estates of Chancery lunatics, who number about 550, and whose property amounts to the large sum of ten millions. In it are detailed several abuses in the entire system of the management not only of the property, but also of the lunatics themselves personally, and it suggests that, instead of placing them in the ordinary lunatic asylums for private patients, 238 of whom are thus circumstanced, there should be asylums solely appropriated to lunatic wards of Chancery, under the care of medical men who would have an interest not in continuing them there, but in restoring them to society ; and that detached cottages might surround these dwellings, and means of attending public worship afforded. The present Board of Visitors of Chancery lunatics, which consists of two physicians, Drs. Southey and

Bright, and Mr. Phillimore a barrister, it is proposed should be confined to two physicians not in general practice, who should devote their whole time to watch over the moral and physical treatment of Chancery lunatics. This "Letter" concludes by averring,

> "That the enormous expense of the present unhealthy system of affidavit evidence, and the unexampled powers of Committees, so far from sparing the feelings of the noblest families of the land, only tend to absorb their property, and further expose the affliction under which they labour.

If but a tithe of the abuses so plainly referred to in this Letter be in existence, no further proof need be required of the Court of Chancery, so far as regards its functions towards the lunatics committed to its guardianship, requiring a thorough and an immediate reform.

We have now reviewed *seriatim* the works we had laid out for ourselves on a most interesting, important, and instructive subject, and one in which all are deeply concerned: we are happy to think that on the present occasion we have had much to commend, and little in comparison seriously to condemn. Our sole motive throughout has been to do justice indifferently, and especially to promote the well-being of the insane, no matter to what rank in life they may belong.

On the Preservation of the Health of Women at the Critical Periods of Life. By E. J. Tilt, M. D., &c. London: Churchill. 1851. 16mo. pp. 142.

We have noticed with pleasure Dr. Tilt's former volume, and gave his labours just praise; but we are sorry to see such a work as the present from his pen. As an introductory chapter to his larger work it would have been very well, but separate it has the air of being written for the public and not for the profession. If it were so, we should say it would do mischief, for there is too much medical description in it, and too many references to "my former work" and other books not to lead women astray. We trust, however, that Dr. Tilt would be above this species of puffing.

There is some common sense in the book, but little that is not well known and advocated by the profession, except one or two points, such as telling young girls to expect menstruation, &c., which we think decidedly objectionable.

Om Nödvändigheten af Vetenskaplig Kontroll öfver Gymnastiska Central-Institutet, med Särskildt afseende på den medico-gymnastiska behandlingen och undervisningen derstädes. Kritisk Framställning af D. Stockholm: P. A. Norstedt & Söner. 1851. pp. 103.

On the Necessity of Scientific Control over the Gymnastic Central Institute, particularly in reference to the Medico-Gymnastic Plan of Treatment and the Instruction delivered there. A Critical Exposition. By D.

The Prevention and Cure of many Chronic Diseases by Movements. By M. Roth, M. D. London: Churchill. 1851. 8vo. pp. 304.

A Few Words on Kinesipathy, or Swedish Medical Gymnastics; the Application of Active and Passive Movements to the Cure of Diseases, according to the Method of P. H. Ling. By A. Georgii. London: Baillière. 1850. 8vo.

Kinesipathy, or Medical Gymnastics, for the Cure of Chronic Disease. By H. Doherty. London: Published by the Author. Pamphlet, pp. 24.

How strangely constituted is the mind of man! Capable, to use the language of Berzelius,—the illustrious fellow-countryman of the authors of the system of which we are about to give a short description,—of "comprehending the greatness of the universe, with all its worlds infinitely continued through unbounded space, of calculating the laws which govern the motions of the heavenly orbs, of subjecting to itself the elements, and of making the powers of nature its servants"[a], yet liable at times to be degraded to the lowest depths of ignorance and folly, to be imposed on by the grossest absurdities, and to embrace as truths the most glaring falsehoods.

It is, unfortunately, in the latter and more unfavourable light that the ever busy human intellect is presented to us on the present occasion, exhibiting still another example of well-educated men degrading the noble science of medicine into an ignoble system of low quackery, and for the sake of sordid gain and fleeting notoriety trifling with human life and happiness. This is harsh language, but, our readers will agree with us, not too harsh for those who profess to cure "tubercles in the brain; affections of the lungs, and diseases of the chest,

[a] Lehrbuch der Chemie, 9ter Band, s. 188. Dresden und Leipzig. 1840.

tracheitis and tubercles; rheumatic carditis; disease of the liver, with ascites; hydrothorax and anasarca; urethritis, even when complicated with stricture," and anything else and everything else that will bring "grist to the mill,"—by means of gymnastic exercises.

Such, in its present state of mature development, is Kinesipathy, which, we are told, "discovered by Ling, a fencing-master, not a physician, and by him developed into a new science, sprung from his genius and fostered by his power, has already obtained, and shall every day more fully obtain, a recognition of rank equal to that of the other departments of medical knowledge."

That a system which, in the absurdity of its pretensions, equals the most degraded charlatanry, should in the nineteenth century receive support and pecuniary assistance from the government and legislature of Sweden, a country the cradle of Linnæus and Berzelius, and in which Kinesipathy's elder sister, Homœopathy, can boast but a single professor, may well excite surprise. Yet such is the fact, and as many of our readers may still be ignorant even of the existence of this so-called science, we shall, before entering into an examination of the pamphlet[a] which has directed our attention to the subject, endeavour to give a brief account of its rise and progress.

Peter Henrik Ling was born at Småland on the 15th of November, 1776. He had the misfortune, when still very young, to lose both his parents. Exposed to great privations, he fought in 1801 at Copenhagen as a volunteer in a Danish ship. He subsequently spent some time in Germany, France, and England, and acquired a perfect knowledge of the languages of these countries. He ranked high as a northern *scald* (bard), but his style was too stern to become popular. His *Asarne* is one of the few epics in the Swedish language. He wrote several tragedies, besides other pieces. Having studied the art of fencing under two French refugees at Stockholm, he commenced in 1805 to teach it, together with the languages he had acquired in his travels, and was in the same year appointed Professor of Fencing at the University of Lund. In addition, he now instructed his pupils in a system of gymnastic exercises, and, in order to direct them with more effect,

[a] We have received, along with this pamphlet, a private letter from the Baron Gustavus von Düben, in which he avows himself as its author, and states his anxiety that the medical profession in the British islands should not be led astray by the statements of Hr. Georgii the introducer of Kinesipathy into England, as to the countenance given to this quackery by the Swedish Association of Physicians.—Ed.

began to study anatomy and physiology. His intention was, we are told by his admirers, to make gymnastics not only a branch of education for healthy persons, but to apply them to the treatment of diseases. He had influence enough to procure in 1813 the establishment, by royal ordinance, of the Gymnastic Central Institute at Stockholm, of which he was appointed director, with an annual salary of 500 rix dollars (about £112). In 1834 he was created a Knight of the Order of the North Star. He died in 1839, and was succeeded by Professor Branting, first his patient, and afterwards his pupil. His system has been introduced to the notice of the English public by Hr. Georgii, under the denomination, *Kinesipathy* (κινησις, movement, and παθος, disease), a term evidently more appliable to St. Vitus' dance than to a plan of treating diseases by movements, but which was evidently adopted by its author from its resemblance in sound to the appellation of the most successful of the modern quackeries, Homœopathy.

The system established by Ling is so very absurd that we should probably be suspected of too highly colouring the picture did we ourselves attempt to draw it; we, therefore, shall leave this task to his friends, and shall take the following account of the Gymnastic Central Institute, and of the system pursued in it, from a favourable review of Hr. Georgii's works in the British Journal of Homœopathy for 1850:—"This Institution is a large building, containing a number of spacious halls, some appropriated to gymnastic exercises and fencing, others to a dissecting-room, an anatomical museum, a library, a lecture-room, &c. Every year there are educated here fifteen or sixteen teachers of gymnastics to supply the colleges, the primary and secondary schools, and the regiments of the army.

"There are also received many patients of both sexes, affected with divers chronic diseases, and the scholars of many of the schools of Stockholm receive there instructions in gymnastic exercises.

"The system of treatment of which Ling was the founder is but ill expressed by the term medical gymnastics, and even kinesitherapeia [the term used by the French professors of the system], or the therapeutics of motion, does not convey an exact idea of the processes pursued, for the means used, besides active and passive movements, include also postures of the body, of particular parts of it, ligatures, compression, and so on. The active movements are either voluntary or forced; the passive movements are all effected by the operator, and consist of friction, percussion, kneading, vibration, pinching, swaying, &c.; and besides these there are pressure on various

parts, positions calculated to cause congestion, &c. Probably Mechanical Medicine is the best name that could be given to the system.

"Many of the operations and manipulations enjoined in this system are strikingly in conformity with the homœopathic principle. Thus, for vertigo, it is customary to use a whirling movement of the head upon the neck; for congestion to the head, pressure on the jugular veins; for hot palms and soles, frictions on these parts; for hemoptysis, percussion on the chest, &c., all of which operations produce the same symptoms they are employed to remove. This consonance of his method with the law discovered by Hahnemann has not escaped the notice of Hr. Georgii, who acknowledges in both his pamphlets the truth of the homœopathic principle in medicine."

The Baron Von Düben, in the preface to the Swedish pamphlet, the title of which appears at the head of this article, states his reason for concealing his name to be, a wish that what he advances may stand upon its own merits and not on the accidents of the author's name and rank. The first and greater part of the pamphlet is occupied with a discussion between the Baron, on the one hand, and Drs. Branting and Liedbeck, two of the examiners at the Central Institute, on the other, on the subject of mistakes committed by the examiners at the yearly examination of the pupils. This discussion was published in several successive numbers of the weekly "Boreas." The second part contains a critique on Hr. Georgii's writings; the third is taken up with a review of the pathology of the Kinesipaths and of the treatment at the Institute; and in the fourth and concluding division of the work, the author, who appears to take a rational view of the subject of medical gymnastics, urges the necessity of placing "the Institution in its integrity under scientific control to be exercised by competent persons, the department of medical gymnastics, as well in its therapeutical as in its educational subdivision, being placed under the special direction of a physician." The perusal of a few extracts from the second and third parts, showing the pretensions of the Directors of the Institute, and their mode of treatment, will, we think, lead our readers to the conclusion we have ourselves formed, that what the Baron seems to deprecate, viz., annihilation, or, as the still more forcible word in his own expressive language is, "tillintetgörelse" (to nothing making), must be the true remedy for the present state of things in that establishment.

A detailed list of the diseases treated at the Institution would be too long for insertion; we have already enumerated

some of them, and it has been seen that even the most serious organic lesions are among the number. Thus we have chest affections treated by "the simultaneous employment of kneading and vibration in the arm-pits, combined with rotations of the arms in the low position." Again, Hr. Georgii, in the Homœopathic Times, quoting from Professor Branting's Official Report in Stockholm, 1842, describes the case of "a patient who apparently had tubercles in one of the hemispheres of the brain [!], an affection which had for many years caused him violent and periodical pains. He was first treated by derivative movements, and afterwards by circular percussions gently applied with the hand to the upper part of the head. This latter application removed the headach, the painful and continual throbbing, as well as the fits of convulsions and vertigo." The Baron, in remarking on this case, points out the manifest inconsistencies in the report, and the certainty from the result that the case was not one of tubercles in the brain. Such reports, he adds, are designated by Dietl, one of the most distinguished and temperate of the Medical School of Vienna, as "miserable juggling, degrading to the sublime seriousness of science, far beneath the dignity of a physician, and befitting only old women, quacks, and cheats." The existence of organic lesions in most of the other cases reported, is, doubtless, equally apocryphal.

We are tempted, notwithstanding their absurdity, to add one specimen more from the pamphlet. "A young woman [!] labouring under an affection of the liver, of many years standing, was treated [kinesipathically]. In three months her sufferings were but slightly alleviated. She was then placed on a system of vibration and pressure beneath the ribs on the right side, and in a month the liver was considerably diminished, the respiration was easy, the chest and abdomen were free from water, and the patient was restored, and able to join with animation in the dance."

"That she should dance for joy," adds the Baron, "is not at all surprising, but the miracle is the entire story."

We have already alluded to the cordial understanding which exists between the professors of homœopathy and those of kinesipathy. Let us hear the testimony which they bear to each other. "At homœopathy," say Herrar Branting and Liedbeck, alluding to a remark of the Baron von Düben, "the author has likewise aimed a blow, and the circumstance that the only physician [Liedbeck] who professes the system in the Scandinavian Peninsula, was one of the examiners at the Gymnastic Central Institute, may, perhaps, have been one cause of

the attack of which both examiners were the object. The progress of homœopathy, judged as it may be with favour or ill-will, is like that of gymnastics, an event in the history of the world. With mighty strides the system makes its conquests through the whole wide world, and none but the most inexperienced youth will venture to condemn such productions of the human mind, characteristic as they are of the march of intellect in the present age, with a declaration like that of the author, 'that there are, thank God, in our country, no homœopathists to consult.' If this be an expression of the opinion of the Hippocratic or Allopathic School, the prediction is not very hazardous, that *le gros bon sens* of the people will at a future time, which is, perhaps, not so very distant, compel a far different confession."

What return can homœopathy give for this noble vindication? Overcome with gratitude, and full of magnanimity, she descends from her high position, takes from her head the laurel crown so proudly won, and, placing it on her younger sister's brow, declares herself surpassed. "We have known," says a writer in the "British Journal of Homœopathy,"[a] "several [!] cases where kinesipathy was successfully employed, EVEN [mirabile dictu] after homœopathy had failed to effect a cure." Can these cases have been similar to the "somewhat rude, but *successful* employment of Kinesipathy" quoted on the next page of the same Journal? where it is stated that "a drunkard, finding his wife dying of cholera, had the cruelty, whilst in a state of inebriety, to beat her violently. This rough usage, far from destroying her as might be expected, roused her, brought on a powerful re-action, and she recovered."

Whence this interchange of compliments? Is there any similarity or sympathy between the two systems which may account for it? Let us see:

"It is notorious," says Baron von Düben, at page 76, "that the gymnasts of the Central Institute already claim to be homœopathists *in corpore et animo*. To be convinced of this, it is sufficient to hear Hr. Branting's fundamental principle of physiological pathology: 'The numerous experiments which have been performed on healthy persons, in order to ascertain more accurately the specific effects of exercises, have in general shown that the irritation which a movement produces in an organ, or a similar irritation already existing in a diseased organism, is subdued by the same movement which produced this pathological condition in the sound organ.'"

But it strikes us that there is a similarity between the two

[a] Vol. viii. p. 261.

systems in practice as well as in theory. They both attribute considerable efficacy to the performance of certain concussions; still, there is this difference between them, that, while one shakes the bottle, the other shakes the patient. Of the two, notwithstanding all the disciples of Hahnemann may say to the contrary, we think the former by far the safer proceeding[a]. Of this we have an illustration, long before the discovery of Kinesipathy, in the case of the Newcastle apothecary, who

> "No opportunity e'er let pass
> Of writing the directions on his labels
> In dapper couplets, like Gay's fables,
> Or rather like the lines in Hudibras:

As thus:

> "When taken
> To be well shaken.'"

But again, Kinesipathy calls phrenology to its aid:

"A young man, all whose mental emotions belonged rather to the world of imagination than to that of reality, had long suffered from sleeplessness, occasioned by over excitement of the mind. He had in addition laboured under a slight affection of the spinal marrow. Point shakings[b], and gentle circular kneadings in the situation of the intellectual organs effected no change, notwithstanding that they were repeated for several days. Similar movements were now practised over the imaginative organs, on which the morbid excitement altogether ceased, and sleep was restored."

[a] "The inherent virtues of medicines are enormously developed by the process of shaking, so that it is absolutely necessary to prescribe in the pharmacopœia the number of shakes to which each medicine is to be subjected."—*Organon*, § cclxxviii. note. See a masterly exposure of Homœopathy and other Quackeries in the first volume of the present series of this Journal, p. 173, *et seq.*

"*Shaking Movement.*—Shaking is a repeated movement, not executed with great force, but acting in the manner of slight jolts and jerks. Should the whole limb be subjected to it, then this is held by its free end with both hands of the assistant, who produces a considerable vibrating movement, which propagates itself to the fixed articulation, and to its circumference, by a very short and exactly executed shaking. If the shaking is to be employed on the head, trunk, or on tender parts, then we distinguish *a flat* (*superficial*) and *a point shaking*. The flat shake is executed by the assistant extending his hand towards the part of the patient's body he wishes to act upon, and making, under a continual pressure, a more or less strong vibrating movement with his arm, and by that means with his hand, which vibration is communicated to a certain part of the patient. The point-shake is done in the same manner, not with the hand, but solely with the end of the third finger, on the spot destined to be subjected to it; this last operation is executed very gently, so that it consists in a very fine, tremulous motion, called *vibration*."—*Roth*, p. 90.

[b] See preceding note.

This reminds us of an account we lately heard from a lady of rank, who has been for many years a martyr to the most violent neuralgic pains, accompanied by sleeplessness, for which she has consulted a great number of practitioners, regular and irregular, in many of the leading cities of Europe. Among others, she, when in Paris, consulted an Italian, whose plan of treatment consisted in *pinching* the scalp and the integuments along the spine, to such a degree as to cause considerable pain. This he continued for some time, receiving, of course, his daily fee. He, too, was skilled in phrenology, for one day, during the usual manipulation, he remarked to his patient that she had the organ of benevolence largely developed, and that, from this circumstance, he was sure she would kindly advance him a fortnight's pay, of which he was then in much need. She did so without taking the precaution to ascertain if *he* had the "bump" of honesty, and, as may be anticipated, never saw him again.

The Baron von Düben concludes his pamphlet by advancing three arguments in favour of maintaining the Gymnastic Central Institute, of course under the reformed organization proposed by him. These are, first, because it is advisable that the physical education of youth should be conducted under medical superintendence; secondly, because it is not advisable to dispense with a person of Hr. Branting's experience and zeal; and thirdly, on account of the great expense of separating the educational from the therapeutical part of the institution, and the loss to the former of the income derived from the reception of the sick. The first argument may be answered, we think, by referring to the power the legislature possesses of founding, if it pleases, a purely educational establishment under medical control; the second, by a reference to the extreme ignorance of the first principles of medicine, and the quackery displayed in the quotation we have just made from Professor Branting's Official Report; and the third, from the fact that no government should, through any paltry economy or for the sake of gain, countenance by their powerful sanction or pecuniary assistance the gross absurdities of the present establishment. Lastly, although the great majority of the cases received at the Central Institute may not be of an infectious nature, it would be desirable that the sick should not crowd to a building where the youth of the city are in the habit of attending.

The book published by M. Roth, M. D., is brought out in a style calculated to attract the notice of the classes in London

which generally furnish the most willing and most profitable victims to such speculators as the followers of Ling and Branting. It is abundantly illustrated with copies of figures, some of which are familiar to us from their appearance previously in the numbers of the Journal des Connaisances Médico-Chirurgicales during the present year. The reader will gladly excuse our entering into a more minute description of the book, or of the infinity of movements and their alleged effects enumerated in it, when we present him with the following specimens, taken at random, of the character of the information to be found there, the sententious wisdom it contains, and the mode of treatment recommended:

"*Sneezing.*—The concussion of the respiratory organs produced by sneezing had been employed for a long time as a curative means, and is even at present believed to be a salutary symptom, at least by the people, which gave rise to the origin of the expression, '*God bless you*,' which is very old, and mentioned by Xenophon. In infants and children, who sneeze easier than cough, this movement is more frequent."

* * * * * * *

"Letting down (the act of lowering) is the entirely opposite movement to the act of getting up."

* * * * * * *

"The prescription in gonorrhœa is generally (besides some movements depending upon particular circumstances) the following:

"1. Percussion on the sacrum in the stride-standing position.

"2. Transversal chopping on the neck, in the sitting position.

"3. Pressure above the os pubis, in the lying position, with elevated back, while the separated and bent legs are drawn towards the abdomen.

"4. Vibration of the perineum in the same position.

"The treatment begins with the percussing the sacrum in the stride-standing position, which, in the first day or two, not only allays and relieves the more violent inflammation and copious secretion, but also changes the whole state of the disease in such a manner that the following treatment by movements (different according to the state of the patient) produces an increased flow of arterial blood in the upper extremities, and the cure is very much accelerated. In the first stage, during which only a moderate stitching pain, tension, and a little secretion appear, the percussion on the sacrum is alone sufficient, if repeated three or four times daily. If the symptoms become more violent, and accompanied by chordee and pains during urinating, &c., then other movements are necessary; they make use of the transversal chopping of the neck, which acts strongly against the chordee, and of the pressure above the os pubis in the above-mentioned lying position, which increases the venous absorption of the bladder and sexual organs, by its effects on the excited nerves of these parts.

"In the second period, if the urinating is very difficult, the perineum swollen and painful, the discharge mixed with blood, and fever is present, then a more general treatment is necessary. To increase the more local absorption in the urethra, vibrations along the whole tract of the perineum, from before backwards, are employed."

The pamphlets of Hr. Georgii and Mr. Doherty, the titles of which are also prefixed to this Review, do not require any notice at our hands; they are mere puffs of the writers, published with the intention of all quacks.

Let it not be supposed that while we thus in unsparing language condemn quackery and imposture, we are insensible to the advantages to be derived from the *judicious* employment of gymnastic exercises, not only as a means of preserving health, but also occasionally of relieving or removing certain morbid conditions of the body, especially when these exercises are conjoined with an unbending of the mind, and the inhalation of a pure atmosphere; but the means employed to attain such ends must be far different from the miscalled "medical gymnastics" of the *soi-disant* Gymnasts of the Central Institute, whose kneadings, and choppings, and pinchings, and shakings, as little resemble the dancing, and running, and leaping, and hurling of the ancient athletæ, as do the most superstitious popular "cures" the scientific prescriptions of an educated physician. We think it possible that a neglect of the due employment of exercise in the practice of some physicians may have ultimately led to the absurdities of Ling and Branting, for in all ages there have been either enthusiastic or weak minds, which, occasionally perceiving the existence of an error, and seizing on a single idea with an exaggerated view of its importance, rush into the opposite extreme—

"Dum vitant stulti vitia, in contraria currunt."

"Incidit in Scyllam, cupiens vitare Charybdim."

Memorials of James Mackness, Esq., M. D., Author of "Moral Aspects of Medical Life," &c. Edited by the Author of "Brampton Rectory," &c. London: Churchill. 1851. 8vo. pp. 271.

We are not afraid of having too many medical biographies; there is so much that is profitable to be learned from those who have lived and striven and conquered, that even a meagre

life, if it be a *life*, and not a calendar, may be a source of strength and guidance. Far more if we are admitted behind the scenes, and can trace the mental history of the individual, with his progress, his struggles, his discouragements, and his triumphs. In our trials we derive help from those who have fought the same battle of life; in our dark hours we may still hope that, as light and success came to them, so it will be given to us. We may also learn from many the true and noble principle of duty which carried them through fatigues and distresses, and made them a blessing to the community among which they dwelt. Above all, we may learn what principles supported them through trial and difficulty and sickness, and at the hour of death. For several admirable biographies of this kind we are indebted to Dr. Greenhill, late of Oxford, but now the successor of Dr. Mackness at Hastings, and which we take this opportunity of strongly recommending to the profession.

The Author of Brampton Rectory (or, we may say, the authoress), has recently made a valuable addition to our store, in the life of an excellent physician and a good man, the late Dr. Mackness of Hastings. The incidents of his life are few and sufficiently simple. He was born at Wellingborough, in Northamptonshire, March 31, 1804, and after a very common education removed with his parents to Edinburgh, where, in the intervals of other necessary occupations, he undertook the study of medicine and surgery. He passed the College of Surgeons in 1824, being then little more than twenty years of age. Immediately afterwards he procured a situation as assistant with Mr. Webber of Yarmouth, and subsequently with Mr. King of Saxmundham in Suffolk. Of his conduct in these situations we have Mrs. King's testimony, that she and Mr. King "always esteemed him as a high-principled, industrious, meritorious character; perhaps it would have been difficult to find a being more kind, honourable, independent, and single-hearted." In the year 1827 he determined to settle in the village of Turvey, there being no resident medical man there. Much interest attaches to this little village, not only from its natural beauties, but from having been the scene of the labours of the Rev. Legh Richmond, and to the combined influences of the locality Mr. Mackness seems to have been very sensible. Here he seems to have spent a portion of his life most peacefully and profitably, doing all the good in his power, making friends among poor and rich, and earning a reputation as a kind and skilful practitioner. In 1831, finding the sphere of practice too limited, he removed to Northampton, where his success appears to have been considerable, and his benevo-

lent exertions most praiseworthy; but, after thus tasting prosperity for a few years, he was obliged to relinquish practice on account of his health. He suffered agony from a singular nervous affection of the lower extremities, involving not only pain but loss of power, with disorder of the stomach, liver, &c.

After spending some years in that most wearisome pursuit, seeking after health, it was suggested by Sir James Clark that the climate of Hastings would be likely to suit him, and as health was to him of paramount importance, he decided to settle there as a physician, having previously graduated at St. Andrew's. His progress was not very different from all other practitioners, except that his probation appears to have been somewhat shorter: the same weary waiting, the same praiseworthy attempts to establish a character, and at length the happy results in ample practice and great usefulness.

For some years he seems to have enjoyed as much happiness as falls to the lot of mortals; but whether the life was too laborious, or that his constitution had been irretrievably injured, the attacks of his old disease returned, his health gave way, and at length, on February 8, 1851, he was carried off by an attack of pneumonia, in the forty-seventh year of his age.

Such is a very brief sketch of the events of Dr. Mackness' life, but to those who on our recommendation will read the book, we promise much instruction. If we had space we should gladly notice much that has interested us in his history. It is worth notice, in tracing the formation of his mind, that his mother was a woman of strong character, of high religious principles, and pure and holy life. From her daily teaching it is evident that much of Dr. Mackness' strict appreciation of duty and stern principle was derived. We can trace this through his whole life, from the time that he determined to study medicine, throughout his sickness and the varied phases of his career.

Again, one cannot but be struck with the determined perseverance with which he pursued his object until it was attained. At Turvey, Northampton, and Hastings, he quietly set to work to do what he could, waiting patiently until his time came, losing no opportunity but improving every chance until success crowned his efforts.

His industry was very remarkable. His early professional knowledge was acquired under very great difficulties; and at each of the above-mentioned places of his residence we find him availing himself of every opportunity of increasing his

stores. He carefully studied the diagnosis of the diseases of the chest by means of the stethoscope, after having been many years in practice; and he set to work with the microscope with the zeal of a young man and the judgment of an old one. Nay, even during his seasons of illness he appears to have sought employment and improvement in every way within his reach. This diligence and energy being applied to his profession, we cannot be surprised that the result was great knowledge and experience, nor that the public deriving the benefit should have rewarded him by its confidence and patronage. But his character had a higher reach still. His perfect honesty and truth, his benevolence, his sense of duty, were all harmonized and intensified (if we may invent a term) by his religious principles. Abundant proof of this is given in his life, by his acts and by the testimony of friends. One observes: "He had the most remarkable tact I ever saw in any medical man. He would draw you into conversation, and all the while his eye was upon you, and you would find afterwards that he had been making observations." Dr. Moore remarks: "I do not wonder at the attachment of his patients to him, for I have had frequent opportunities of witnessing the completeness with which he threw his mind into the consideration of his cases, and how thoroughly he blended kindly sympathy with his scientific endeavours for their improvement."

A patient in the humble ranks writes:

"I am very much grieved to hear of the death of poor Dr. Mackness. He has always been a kind friend to me and all my family, and indeed to all that knew him, whether rich or poor; and it is for the loss that we all experience in his death that I grieve; but I ought to rejoice, for he has only exchanged this life of pain and trial for one of eternal happiness. He was so kind and sympathizing, he always pitied me, for he entered into my sufferings, and told me one day that the longest life was but short, and that if I could not enjoy the pleasure that other people did, not to mind on this little journey; but I shall never hear his kind voice any more."

One more extract, and the picture will be complete:

"It was impossible, as you well know, for those who saw him often not to be struck with the sweet feeling and Christian spirit which pervaded his whole life; yet this impression was produced far more by the whole tenor of our intercourse with him than by any lengthened or formal conversation on religious subjects. His remarks were always so beautifully appropriate, and introduced so naturally from what was passing around, that though at the time they were often most striking, they cannot easily be recalled. You know what an enthusiastic admirer he was of the beauties of nature.

He really seemed to love flowers, and often when looking upon them called upon us to admire the wisdom and skill of their Almighty Creator, reminding us how grateful we should be to that goodness which has scattered such pleasures on our path, and placed us in so happy and beautiful a world." "He then spoke most sweetly of the consolations of religion, remarking how inefficient at such a time (of sickness) is all human solace, and how delightful it was to be able to believe that our Heavenly Father doeth all things well."

The whole course of Dr. Mackness' life is full of instruction to those who are striving after that which is excellent, and to his friends the story of his illness and death is full of comfort.

His medical writings are well known to the profession, and highly esteemed; but upon these we cannot dwell; we shall be satisfied if we induce our professional brethren to peruse this interesting biography, and if they derive as much pleasure from it as we have done.

On the Identity or Non-Identity of Typhoid and Typhus Fevers. By W. Jenner, M. D., &c. London: Churchill. 1850. 8vo. pp. 102.

Bacon has remarked that there are two dispositions of mind equally ill-suited to faithful observation in scientific research; one can only see differences, the other can only see resemblances; the one exalts accidents into essentials, the other treats essentials as accidents: the one severs with rash hand unions that ought to be respected, while the other would effect union between essentially discordant elements, did they present a superficial or apparent agreement.

Perhaps there is no science that more forcibly illustrates the truth of this observation than medicine. And with humiliation it must be admitted there is no science in which loose observation, loose thinking, and loose reasoning, have been more freely indulged or literally revelled. Medicine has been singularly exposed to the undue intrusive influence of the several collateral sciences with which she is more or less intimately connected, and has had her most important interests seriously compromised by such intrusion. It is a notorious fact that at the time the circulation of the blood was discovered, the medical mind was so engrossed with the predominating mechanical theory of the day, that this brilliant discovery had to wait for some time before it produced its due influence.

Nor has medicine suffered from her kindred sciences only, but every art or system of philosophy, false or true, has had some influence on it, either directly or indirectly. It has been well observed: "Un systeme philosophique adoptè dans un pays exerce une grande influence sur la tendance des esprits; c'est le moule universel dans lequel si jettent toutes les pensées: eux mêmes qui n'ont point etudiè le systeme se conforment sans le sçavoir à la disposition generale qu'il inspire." We completely concur in the truth of the preceding remark, and discover in medicine as well as in other sciences, the materialism of the French philosophy that prevailed at the period of the Revolution.

Bichat was the first who gave pathology this peculiar impress; and from Bichat downwards, succeeding French pathologists have ever followed in his track, and have sought an explanation of symptoms exhibited by disease during life, in palpable structural change discovered after death. This peculiar tendency has constituted a kind of distinction between Continental and British pathology; not that the British physician does not search for evidences of disease in altered structure, but he has learned to be as little disappointed when he has found but a slight apparent change, when the symptoms would have led him to expect a considerable one, as to be but little surprised when he has found a large amount of altered structure, of whose existence symptoms during life afforded but scanty, if any evidence. Experience has led him to doubt that symptoms and structural change mutually represent each other.

To this difference of bias of the medical mind we attribute in some measure the wide difference of opinion that has prevailed and still prevails as to the nature of fever: a difference which may be stated to consist in this, that the continental physician regards all fevers as symptomatic of some palpable local lesion, and dependent upon it. The British physician, on the contrary, holds that there is a fever which, from its not appearing to be connected with any peculiar lesion to which it stands in the relation of cause to effect, he designates essential or idiopathic. Many of the continental physicians have thought that the term idiopathic or essential fever ought to be expunged from pathology, and its place be supplied by either gastro-enterite, or enterite, or mesentero-enterite, or dothinenterite, or follicular-enteritis; for that in no case of the so-called idiopathic or essential fever, when an opportunity was afforded of making a *post mortem* examination, were there wanting traces of the lesion implied in one or other of these designa-

tions; and that if they had not hitherto been observed, it was not because they had not existed, but because pathological observation had not been directed to them.

The British physician freely admits that pathological observations and examinations were not as carefully made formerly as they have been in latter years; yet he cannot allow that this department of medicine ever had so little care and attention bestowed upon it as that these extensive lesions which were afterwards observed could have been completely overlooked. There is another argument which with the British physician is very conclusive, that this intestinal lesion was not a constant but overlooked feature of fever. No class of medicines was more extensively and constantly used formerly in the treatment of fever than purgatives, and that in the hands of the most successful practitioners. Had the intestinal lesion been present in cases of fever so treated, we may suppose what would have been the probable result from the consequences that have been known to follow the most careful exhibition of the mildest purgative in cases where the lesion did exist? Has not a single small dose of castor oil produced a diarrhœa which no medicine could control?

But if the lesion was present it would be almost sure to give rise to diarrhœa (although we have seen a very few exceptional cases in which examination after death has proved the presence of the intestinal lesion without there being any diarrhœa during life), and as we cannot conceive it possible that purgatives could have been exhibited while diarrhœa was present, we infer its absence and consequent absence of its cause whenever purgatives were exhibited, and that was in most of the fevers which formerly prevailed. We avail ourselves of this argument, satisfied as we are that the results of treatment often serve as tests either to distinguish or to identify diseases whose identity or difference we should find it difficult to establish either by symptoms or pathological appearances. We would illustrate this by the history of delirium tremens. The similarity of its phenomena to those of arachnitis suggested a similarity of treatment. The antiphlogistic treatment was employed, and we know how signally it failed. The failure of this treatment suggested that the pathology of the disease had probably been misapprehended, and that the nervous was more implicated in the disease than the vascular system. This view led to the treatment by opium, which was attended with as remarkable success as the antiphlogistic plan was with opposite results.

Another proof that the intestinal lesion was rarely met

with in connexion with fever seldom absent from our country, we draw from the fact, that pathological museums, containing other specimens testifying that pathology was not altogether neglected, exhibited but few of this lesion. But we assert, and that from actual knowledge, that the intestinal lesion in connexion with fever not only was rare in our own country, but was rare also in France up to a certain period.

It is quite true that Petit and Serres described it as early as 1813 as entero-mesenteric fever, and connected the local lesion with the fever in the relation of cause and effect. But this doctrine was soon superseded by Broussais' gastro-enterite, which differed from the former in that it fixed the disease in the general mucous membrane lining the stomach and intestines, instead of in Peyer's patches. Broussais' doctrine continued in the ascendant for a considerable time, much longer than it would have done if those who were opposed to it (for although it had many adherents it had also many opponents) could have produced against its claims the less equivocal pathological pretensions of so palpable an alteration of structure as that presented by the follicular lesion. Those who followed the attractive clinique of the Professor of Val de Grâce were often called on to admit as a pathological appearance what would have been regarded by one who had not a special theory to support as at least questionable proof of the existence of gastro-enterite.

At this period of the popularity of Broussais' doctrine of gastro-enterite we had an opportunity of attending the clinique of La Charité, and had continued intercourse with M. Andral, who was then engaged in his valuable work on Pathology. We know that at this time the intestinal lesion did not often complicate the fever of Paris, cases of which were constantly present in the hospital, and afforded frequent opportunities of *post mortem* examinations. Had it been present it would have been sure to have been noticed by so careful a pathologist as M. Andral. It was reserved for a later period in the history of pathology for it to develop itself so palpably as to attract the attention of all pathologists in every country. When it did appear it assumed an attitude of such importance that its influence on medicine was everywhere felt and acknowledged ; and that it was a comparatively new lesion, and not one that had really existed and been overlooked, we conclude from the fact that there was, as it were, a simultaneous notice of it in all countries. While we assert this, we well know that the lesion was not a completely new one, but that its extent constituted the novelty.

It was to this period of the history of this lesion that we al-

luded when we remarked that it was thought by many continental pathologists that its designation should be substituted for that of essential fever, for that what had hitherto been looked upon as essential fever was neither more nor less than fever caused by this lesion. That M. Louis entertained this feeling at first we think we are justified in inferring from the title of his work on the subject, "Recherches anatomiques, pathologiques, et thérapeutiques, sur la maladie connue sous les noms de gastro-entérite, fièvre putride, adynamique, atonique, typhoïde," &c. &c. This at least seemed to have been his first impression; we shall presently see to what extent he continued to retain it. Most of the ablest pathologists in Paris, and whose names gave weight to their opinions, took up the same impression, either altogether or under some special modification or limitation of it.

It happened that at this time pathology was so ardently studied at Paris, that students of medicine who were interested in this branch of the science were attracted there from all parts of the world, so that the opinions there professed obtained the widest circulation, for each student carried back to his own country the pathological views he had imbibed there. All the world became interested in this most interesting question. America as well as Europe eagerly caught it up. France certainly took the lead in embracing the opinion that the intestestinal lesion was so constant an element in fever that it probably stood to it in the relation of cause. We have already ascribed this readiness of France to adopt the anatomical theory of fever to the particular bias or direction which pathology had impressed on it by Bichat, who carried the materialism of the day into medicine.

While the mass of French pathologists entertained this view, there were some more cautious spirits who could not adopt it in its entirety, and amongst these appear the high names of Louis, Andral, and Chomel. Whilst these admitted the great frequency of the intestinal lesion, they also allowed that they met with occasional cases where this lesion was absent, and this at the same time that the intestinal lesion was exhibiting itself so frequently. They therefore could not consistently give in their adhesion to this pathological change being the constant cause of fever. Thus, then, two different opinions prevailed on the point, and which may be stated as they have been by M. Piorry: one maintaining the following as the order of development, enteritis, ulceration, formation of slough and putrid matter, absorption of this putrid matter, infection of the blood, and consequent general and secondary local phenomena;

the other considering the first link in the morbid catenation to be absorption of a morbific principle which infects the blood; then follicular enteritis attended with ulceration and sometimes with gangrene, then formation of putrid matter, absorption of this, then general typhoid symptoms. This statement embraces the two views: the one considering the enteritis the *point du départ* of the disease; the other regarding the infection of the blood as the first step to it.

The pathologists of our country have ever refused to adopt the first view, of enteritis being the commencement of the disease, and the fever symptomatic of it. And again, they are too well acquainted with typhus without any such lesion to allow to such an occasional element any more than of its being an accidental complication. In Ireland, where our social condition has unhappily often caused us to be visited with fever, we have met with the lesion complicating typhus fever, but not more frequently than we have met with several other local lesions complicating fever, without acknowledging the latter to be more than mere epiphenomena or accidental additions, but which, being present, reflect their influence more or less on the general affection, and thus modify its general aspect.

Since the intestinal lesion complicated fever in this country other local lesions have also made their appearance, thus, an unusual form of pneumonia presented itself as a very frequent local lesion, viz., an affection of the upper lobes of the organ, which we know to be a complete inversion of the order in which common pneumonia attacks the lung; and a comparatively new lesion exhibited itself in connexion with the fever that prevailed in Ireland in 1847–48; we allude to cerebro-spinal arachnitis. We do not mean to assert that these lesions were as constantly in connexion with fever as was the intestinal, when it prevailed. Yet whenever they were present they only modified the fever in such way as might have been expected from the nature of the organs involved. The fever maintained its type irrespective of the local lesion, and the local lesion in its turn yielded more readily to a treatment accommodated to the type of the fever. In the same way also, when the intestinal lesion complicated fever, it ever was the type of the fever that regulated the treatment, the local lesion also being taken into account, but never dealt with as enteritis producing fever.

Now it was never deemed necessary for the interests of practical medicine to resolve these several complications into so many distinct diseases, nor did there ever seem to be sufficient reason for treating the complication of the intestinal

lesion differently, and for assigning to it an independence to which the others did not appear to be equally entitled.

The author of an able article on the diagnosis of fevers, in a recent number of the British and Foreign Medical Review, remarks, that had we been asked twenty years ago to find an appropriate simile for the disease called fever, we could have made no better comparison than with our serviceable friend Proteus. Of course the author means to insinuate that fever is now so constant in its character that poor Proteus is no longer required,—the once applicable simile is no longer so. But we believe that the simile is as applicable to-day as it was twenty years ago. The more we see of fevers, and the more we read of fevers, the more are we constrained to ask, "quo teneam nodo mutantem Protea vultum?" We make this assertion deliberately, after twenty years' experience of fever, and fresh from the perusal of the article to which we have referred, and which certainly has failed to convince us that fever is that uniform thing, always exhibiting itself under one and the same aspect, and that those modifications of disease which have hitherto perplexed pathology, by being grouped with fever, would be much more conveniently separated, and made distinct diseases.

The author commends the efforts of Dr. Jenner to accomplish this object, and considers that these efforts have eventuated in settling the difficult question as to the identity or non-identity of typhus and typhoid fever, by proving their essential difference. We readily and heartily contribute our commendations to Dr. Jenner for what he has done in this important matter, while we at the same time confess that we do not share in his conclusions. He has proved what we conceive did not require proof, that typhus and typhoid fever are not perfectly similar diseases. Had they been perfectly identical there had been no occasion for giving them different names. The same name would have suited both. But we own we have not been convinced by Dr. Jenner's observations that typhoid fever is not, as its name implies, a typhus-like fever. We believe that these two forms of disease are, if we may be allowed the expression, *blood* relations, and that they cannot be separated without doing violence to the interests both of pathology and practical medicine.

We give Dr. Jenner all due credit for the care he has bestowed on his observations, and further add, that the course he has adopted is exactly the one that will decide the question, if it is to be decided. But we are not sanguine enough to anticipate a very speedy solution of it. We believe it is reserved for the time when our knowledge of the blood and of the nervous

system will be immeasurably in advance of what it is at present, as we are persuaded, it is in these systems that the disease is at least primarily located. In fact, this is admitted either directly or indirectly by all, no matter how they may differ on other points concerning fever.

Those who would relieve themselves of the difficulty that the absence of the local lesion presents to their view of this lesion being, if not the cause, at least the constant anatomical character of typhoid fever, are constrained to look to the change induced in the blood as the solution of this difficulty, and are obliged to search after an analogy between this disease and small pox (in which death does occur, although very rarely before the eruption appears) to help them out of it.

Dr. Jenner claims for London the exclusive competency as a field whereupon to decide this momentous question of the identity or non-identity of typhus and typhoid fever, for that there only always exist cases of the two forms of disease to bring into juxtaposition and to compare. This observation of Dr. Jenner's savours a little of the prevailing spirit of centralization. But we think that the very remark contains something opposed to Dr. Jenner's view of the complete distinctness of typhus and typhoid fever. For very dissimilar diseases do not generally appear at the same time, but commonly only such as are related to each other; and even those which are dissimilar lose something of their differences, and conform to the prevailing type.

We do not purpose following Dr. Jenner through the details of his comparison betweeen the two diseases; we shall content ourselves with a few remarks, not in proof of the identity, but of the relation between the two diseases. We cannot help remarking on the very first sentence with which Dr. Jenner prefaces his observations, as conveying in its truth what bears hard upon his own view, and therefore reflects credit on his candour. He remarks:

> "It is beyond dispute that there are large groups of diseases arranged under the same heads in systematic works on medicine of which the only bonds of union are, that their nature is unknown, and that *they present in common certain pretty constant and striking symptoms.*"

Now certainly, when we consider that medical science wants what would make it an exact science, that its problems do not often admit of demonstration, but must in general be decided by accumulated probabilities, it is not very wonderful that diseases should be grouped that presented in

common certain pretty constant and striking symptoms, and which also might in their unknown nature contain, for all that was known to the contrary, other points of relation. Certainly the common possession of certain constant and striking symptoms would argue in favour of the unknown nature connecting rather than separating the diseases. Those who argue in favour of the reasonableness of grouping diseases which present these admitted features of resemblance, both in their constancy and in their striking character, have a right to insist upon a strong case to show that they ought to be separated in spite of their features of resemblance.

Dr. Jenner does not claim for the local lesion in typhoid fever more than that it is the anatomical element of the disease, and that it may be absent and will be absent should death occur in a few days after the first seizure. He admits that in such case, before the lesion has been developed, the blood or nervous system has been so damaged by the absorption of the poison as to destroy life. We would ask what he who writes thus has contributed towards settling this very abstruse question. He certainly has not penetrated much further than his compeers into the terra incognita of the pathology of the nervous system and the blood. He is obliged to appeal to a mysterious disturbance in either the blood or nervous system, incompatible with life, but what this disturbance is, or how it destroys life differently from typhus fever, when it does destroy life in an equally short time, is not attempted to be explained.

Dr. Jenner founds an argument on the likelihood that time and advance in knowledge will establish a distinction between typhus and typhoid fever, on the fact that measles and scarlatina had been confounded, although their distinct character is undeniable. We think we can produce against this argument *ad ignorantiam*, one founded on the identity of a disease assuming aspects as diverse from each as the common features of scarlatina and measles led to their confusion. We allude to the diversified aspects of scarlatina. We have seen fatal scarlatina without eruption and with sore throat, or without sore throat and with eruption, or without either eruption or sore throat. We have seen scarlatina attended with all the symptoms, both local and general, of acute rheumatism or rheumatic fever, and in which the blood was both buffed and cupped. We have seen it also with fever of a low typhoid type, and with purulent effusion into the joints. We have seen numerous intermediate degrees of the disease between these two extremes. Ought we to have disclaimed a relation between all these very various pathological conditions, or have denied

it on the grounds that they were so very unlike each other? It is not every child that can be identified by his likeness to his parent, nor can kindred be claimed on the bare ground of physical resemblance. It is with the differences of the blood that we connect the different aspects of the scarlatina; and so also we connect all the differences upon which Dr. Jenner would seek to establish a complete and absolute distinction between typhus and typhoid fever. And when Dr. Jenner has proved to us that the affection of the blood in typhus is completely different from the affection of the blood in typhoid fever, then, and not till then, can we consent to the distinctness of the two diseases, or modification of the same disease.

We would remark, in reference to the symptoms of the two diseases which were compared, we ever receive commemorative symptoms with some degree of caution, as we have learned by experience how little they are to be depended upon.

We quite concur with Dr. Jenner as to the difference of the rash in the two forms, both as respects its colour and extent; its deeper colour and greater extent in typhus than in typhoid fever. Certainly we cannot discover in this difference, which Dr. Jenner remarks as one of the most constant, and, therefore, one of the most usefully diagnostic symptoms of the two diseases, anything in opposition to our view of the blood being affected more gravely in typhus than in typhoid fever, just as we consider it more gravely affected in typhoid scarlatina with purulent arthritis, than in sthenic scarlatina with the common arthritic affection of acute rheumatism.

What is the import or significancy of the difference of the rash, and upon what does this difference depend? We would, in the first place, ascribe its less extent in typhoid fever to the greater determination of blood to the intestines in case of the intestinal lesion, while in typhus where there is no determination to the mucous membrane the blood is undividedly directed to the skin. An indiscreet or ill-timed exhibition of a purgative in the early stage of an exanthem, when the cutaneous affection has just made its appearance, has sometimes brought under our notice this alternating congestion of the capillaries of the two portions of the tegumentary membrane, by causing the skin to become pale when the purgative has produced an afflux of blood to the mucous membrane.

But we observe as proof of our view that the difference between the two diseases consists in the blood being more damaged in the one than in the other; in the difference of the character of the rash in the two diseases, the rash in typhoid

fever consisting in congestion of the cutaneous capillaries, while the rash in typhus is an actual hemorrhage; the blood being extravasated into the subcutaneous areolar tissue. In the typhoid fever the blood is not disposed to leave the vessels, nor are they, in their turn, disposed to allow it to escape. In typhus, on the other hand, we believe the blood undergoes a change which facilitates its escape from the vessels, and that the vessels also lose their tone and so indirectly favour its escape. The attenuated condition of the blood and its indisposition to coagulation has ever been noticed as characteristic of typhus, as contrasted with fever of a more sthenic type. We would extend our explanation of the difference of rash in typhus and typhoid fevers to other differences noticed by Dr. Jenner, and would connect them also with the alteration that the blood undergoes in the two affections.

We shall not go through the pathological appearances exhibited by both diseases, but only remark how those of typhoid fever indicate distinct inflammation, while those of typhus bespeak only passive congestion. We make no further allusion to the intestinal lesion than to observe, that the differences in the ulcerations and the distinctions of *plaques dures et molles* prove to us very clearly that not alone does the main difference between typhus and typhoid fever reside in the blood; but that there are differences amongst the cases of typhoid fever depending on different conditions of the blood, the more vitiated state of this fluid producing the heterologous deposit exhibiting itself under the form of the *plaques dures*, and which were found in cases that more resembled typhus in the shortness of their duration.

We shall illustrate our observations in reference to the inflammations in typhoid fever and congestion in typhus, by the different conditions in which the lungs were found: granular and non-granular lobular consolidation (which are unequivocal inflammatory conditions) were very frequent in subjects dead from typhoid fever. The reverse was the fact, in reference to consolidation from congestion (or what Piorry, designates hypostatic pneumonia, but which we doubt if it be pneumonia at all) of the most depending part of the lung.

Dr. Jenner has made precisely the same remark on the state of the pleura in the two diseases, often exhibiting the ordinary appearances of acute pleuritis in typhoid fever, rarely exhibiting these appearances in typhus, and whenever present, less in amount.

Hunter considered the coagulation of the blood an analogous phenomenon to cadaveric rigidity. Dr. Jenner's ob-

servations tend to confirm this view, for they show how much more quickly this rigidity ceases in typhus, where the blood remains fluid, than in typhoid fever, where it shows a disposition to coagulate. In connexion with the subject of cadaveric rigidity, we are satisfied that Dr. Jenner has referred the flabby condition of the heart (a condition of this organ which has recently attracted a good deal of attention, and to which some pathologists have given the designation *cardiomalachia*, believing it to depend on an actual diminution of consistency of its structure) to its true cause, when he attributes it to whatever produces relaxation in the other muscles, as he found a close relation to subsist between the heart and the other muscles, in reference to the time they retained or lost their rigidity. It is an interesting fact recorded by Dr. Jenner, that the cases of typhoid fever which presented the flabby heart, and were by this so much more identified with typhus, ran a much more rapidly fatal course than other cases of typhoid fever.

Before we leave the subject of the pathological appearances presented by the two diseases, we would remark, that when compared with each other, those of typhus ever bespeak a much lower condition of vitality than those of typhoid fever. We would just notice, the pericardium in the former contained serosity red from a transudation of a solution of colouring matter of the blood, while in the latter the serum was colourless from the condition of the parts being such as to resist this transudation. In the same way the lining membrane of the heart was much oftener stained of a dark red colour in typhus than in typhoid fever, physical laws beginning to act much sooner in the former than in the latter.

Dr. Jenner conceives it would be an extravagant hypothesis to imagine that typhus and typhoid fever were the same disease with the intestinal lesion superadded to the latter, and that the addition instead of accelerating should actually retard death. As we before stated, it has not been asserted in this country that typhoid fever is typhus, but that it is *like* typhus, therefore this is scarcely a fair way of putting the argument. But we do assert that the fatality of a disease is often heightened by its concentration, while its danger is lessened by its diffusion. This very typhoid fever has taught us how careful we should be, when at the same time we have two organs affected, not to make one the object of treatment more than the other, because that by doing so, in the exact measure and degree in which we relieve the object of our care, we throw the load of disease on the other. We have seen the truth of

this observation exemplified in cases of frequent occurrence, when delirium and abdominal symptoms, especially diarrhœa, indicated affections of the brain and intestines, and in which a check to the diarrhœa has greatly aggravated this affection of the brain. The additional irritation of a blister, in a case of pneumonia, does not essentially add to the disease of the individual to whom it is applied, but relieves by sharing in it.

We need hardly remind our readers how often the system relieves itself by the establishment of local diseases; and as these local diseases are sometimes of a very serious character, they reflect injurious effects on the system, so that what nature intended to serve as a relief becomes a positive aggravation of the condition of the individual; we therefore feel that we may, without subjecting ourselves to being charged with sustaining an absurd, however apparently paradoxical hypothesis, assert that typhoid fever with the intestinal lesion may be a less dangerous disease than typhoid fever without it, because in the latter case the typhoid fever resembles typhus more closely both in its symptoms during life and appearances after death.

In the epidemics of scarlatina that we witnessed some years past how infinitely more fatal were cases where we could hardly discover any sore throat, than others where the throat was most seriously affected! So much was this the case, that so far from being alarmed with the condition of the throat, we often hailed it as the index of a less formidable disease, and one over which treatment was more likely to exercise salutary control; we therefore can see how nature may, consistently with pathological analogy, relieve the general affection of typhoid fever by setting up a local disease in the intestines, although that local disease may destroy life in more ways than one, either by perforation and consequent peritonitis, or from the amount of irritation from extensive ulceration, just as the cutaneous irritation keeps up the fever of small-pox, and will give rise to fatal convulsions as in extensive burns and scalds.

All pathologists who have directed their attention to the subject under consideration have endeavoured to establish a difference in the periods of life at which the two diseases affect, making typhus the disease of advanced life, while typhoid fever affects persons of a more vigorous age. That such a difference should exist is perfectly consonant with the view that we have taken of the two diseases; the old blood is less able to bear the injury inflicted upon it by the morbific principle, and shows its weakness in the physical changes that it presents, when compared with the blood in typhoid fever which retains its coagulating property, and, as it were, re-

sents the injury, and tries to relieve itself of it in various shapes and ways. It is in the proper direction and management of these efforts that the skill of the physician consists. Does not the treatment of these two diseases (we have, for convenience, called them two diseases, although we are persuaded they are one) confirm this view? With the old patient, whose blood has already lost much of its life and energy, we must be liberal in the use of stimulants; while with the younger, although he has been subjected to a weakening influence and has to pass through a protracted ordeal, we have need of much caution in adjusting the quantity of stimulant, if any, to the necessities of the case. The judicious use of stimulants in typhoid fever is one of the nicest and most difficult points of practical medicine. Still experience has proved to us that careful exhibition of stimulants, and not treating the disease as an original inflammation, is the true secret of success.

There are many other points connected with Dr. Jenner's observations which, did space permit, we should have most gladly and we feel, too, most profitably considered. We cannot, however, take leave of the subject without offering to Dr. Jenner our most grateful acknowledgments for the great services he has rendered to medicine by his large contribution of most valuable facts. He has not convinced us that typhoid fever and typhus fever are essentially different diseases, but, in despite of his reasonings, but by help of his facts, our faith is rather confirmed than weakened as to the relationship subsisting between these two forms of disease,—that they are as like as such relation might be expected to be, "facies non omnibus una, haud diversa tamen, qualem decet esse sororum."

While we leave Dr. Jenner to his own conclusions, we only ask in turn to be left to ours: "veniam damus petimusque vicissim." But we cannot conclude our remarks without reiterating our decided conviction that it is hopeless to expect to decide the question at issue as long as we are so thoroughly ignorant of the chief element on which the decision of the question hinges, we allude to the physiology and pathology of the blood and the nervous system; until we know more about these we are but guessing, but groping our way in the dark,—and in constant danger of substituting secondary lesions for the primary disease, of confounding affections which ought to be distinguished, and of separating those which are naturally related. Let Dr. Jenner but continue in the track he has commenced, and, for our part, as truth only is our object, and as we have no particular view to support, we feel we are quite free to be

convinced, so soon as we can be satisfied with the proofs he may adduce, but at the same time we must say that it is too important a point, and involves in its solution too much practical interest, to be determined on any but the most satisfactory evidence of which the subject is susceptible.

Observations on the Diseases of the Rectum. By T. B. Curling, F. R. S., Surgeon to, and Lecturer on Surgery at, the London Hospital, &c. London. Highley. 1851. 8vo. pp. 124.

If the number of treatises which have been written on special diseases were to be considered as a measure of their practical value, great indeed should be the benefit derived by mankind in many of the most distressing and most painful ailments. To the diseases comprised under the title of Mr. Curling's work this remark is especially applicable, as in surgical literature it will be found, that every attention has been paid to them, and that by some of the most celebrated members of the profession at home and in other countries. This is as it should be: diseases of the rectum are entitled to a specialty; they are frequent in occurrence; they are very painful; they are numerous and varied; and, unfortunately, very many of them are far from controllable by present surgical means. It is hence rather to be wished, that the list of special works treating on the more important diseases should not be diminished, with the hope that, ultimately, substantial curative measures may be devised in treating them.

In Mr. Curling's work before us his remarks are entitled to every attention, for they are evidently those of a clinical observer; but we must state, *in limine*, that we cannot subscribe to his assertion that, "with a few exceptions, there are no diseases which yield more readily and effectually to careful management and surgical treatment, or which in their results afford greater satisfaction to the practitioner." We entertain from our experience, which has not been very limited, a less sanguine opinion. We will not say that the majority of these diseases are not remediable, but we regret to assert that they are far from being easily curable.

In the "Introductory Observations" many practical hints are given, which will be found useful. Thus:

"In the treatment of these diseases it is, in most cases, important that an early and careful examination should be made of the part affected. By neglect of this precaution serious disorders, which, if detected in time, would yield easily to treatment, are al-

lowed to make progress, and to become much more difficult of cure. In females the delicacy of the sex too frequently leads to concealment of these complaints, and raises obstacles to an inspection of the seat of them."

Of these directions we highly approve. We have too often met with cases where serious mischief has arisen from inattention in such respects. We have seen instances of rectal disease, and it the primary affection, treated as chronic diarrhœa, chronic dysentery; nay, more, both vaginal and visceral affections confounded with it. In the examination of the rectum we have derived the greatest benefit from the use of the finger, and without detracting from the value of the speculum we would by no means be satisfied unless we had recourse to the former, allusions to the use of which we are surprised the author omits. In some of the diseases of the rectum, in which, in fact, the speculum is useless, as will be seen hereafter, it is an invaluable assistant in our diagnosis. As to the selection of speculum or dilator,—the latter we employ sometimes with great advantage,—we must state that many in use are totally unfitted for the object which it is the intention to accomplish, and our author appears to be alive to many of their disadvantages. The agony experienced from their employment is often extreme, and particularly when they are constructed with a side-opening, unless the provision for a well, but smooth-fitting plug exists, or that the finger can enter freely and act as such, so as to prevent the bulging in of the mucous coat, which not alone limits the surface for examination, but is productive of the greatest torture, both in the introduction and the removal of the instrument; and if this occurs in a comparatively healthy condition of bowel, what must it be when it is the seat of a very painful affection? We occasionally use a dilator with a well-moulded plug, and a speculum with a similar contrivance, as advocated by the late Professor Colles, who had vast knowledge and experience in the treatment of these diseases. We have also used Mr. Hilton's, or at least what we understood to be Mr. Hilton's speculum, and we have found the slide attached to it most unmanageable; and, what is still more important, utterly unfitted for the only case in which it might be of advantage, namely, ulcer of the rectum. We have also employed the reflecting speculum, and this we have found the most defective, but perhaps the fault rested with the maker. The speculum we prefer resembles much that recommended by our author, and has been in use in this city for many years; it is described by Mr. Curling as "being plated, of a conical

form, so as readily to penetrate the sphincter, with the side-opening of sufficient width and carried to the blind extremity of the instrument, and instead of a movable piece, an ebony plug, fitted with a plate which fits close into the aperture, is substituted." We approve particularly of this plug, and especially of its conical shape. We occasionally use, too, a short speculum of box-wood, having a lateral opening, oval in shape, with the edges bevelled off, and of a caliber sufficient to admit the fore-finger, which acts as a plug. This instrument has no handle, yet it is surprising how easily it can be moved about and the special surface of the mucous membrane exhibited as we please, both for examination and treatment. In ulcers of the rectum near the anus, it is in our opinion most invaluable.

In his Introductory Observations Mr. Curling makes the following remarks on the employment of chloroform:

"In the treatment of diseases of the rectum chloroform is a valuable auxiliary. In making examinations I have derived the greatest assistance and advantage from it. Under its influence the irritable sphincter relaxes, and a complete view can be had of the seat of disease in cases where pain and spasm would otherwise offer almost insuperable obstacles to a satisfactory exploration. And, in operations more painful than serious, the use of this remedy has not only facilitated their performance, but saved the patient considerable suffering and distress."

Now, we must plead ignorance as to the value of anæsthetic agents in the investigation and treatment of diseases of the rectum. As far as our experience has enabled us to come to a decision, we must agree with Mr. Fleming,—whose work we reviewed in our last Number,—who gives cases to show the objections that exist as to its use; and really when we reflect seriously on the necessary position of the patient, and the assistance he must give the surgeon, we have yet to learn how anæsthetics can be advantageously had recourse to. If chloroform be employed at all its action must be restricted: its conclusive effects cannot be contemplated.

We conclude that every practical surgeon is alive to the necessity of attention to the general health when operative proceedings are contemplated in disease of the rectum or in its vicinity. Great caution, indeed, is requisite. We could instance cases of fistula in ano, and of hemorrhoids in particular, where they had existed for a lengthened period, and when their cure was fatal to the patient within a very limited period. Amongst other symptoms the author mentions the occurrence of albumen in the urine as an objection to operative interfe-

rence; but it is now generally admitted that the presence of this principle in the secretion of the kidneys is assumed in too many cases to be an indication of renal lesion.

Having thus referred to Mr. Curling's Introductory Remarks, instead of attempting any analysis of his book, we think that we shall interest our readers more, and at the same time incite them to refer to the volume itself, if we select two of his chapters, which comprise the more common of the affections of the rectum, for notice; and with this view we shall proceed to examine those which treat of "the irritable ulcer of the rectum," and of "hemorrhoids." Such forms of disease are of daily occurrence.

1. *Irritable Ulcer of the Rectum.*—This form of ulcer of the rectum is by no means of rare occurrence, and it is most tedious and obstinate in yielding to treatment. We agree with the author as to the ordinary seat of this ulcer, and we also agree with him as to the intensity of suffering of the subject of it. Yet we have met with cases where not a particle of suffering existed, and where rather curiosity than otherwise led to its detection in obstinate dysenteric diarrhœa, the cure of the latter rapidly following the attention paid to the former. Ulcer of the rectum is almost always within reach of the finger, and either wholly or partially within sight by divaricating the anal aperture or by using a polished gorget speculum or rack-dilating speculum,—much on the principle of the instrument for the vagina. The ulcer is often single, and, as our author states, curable by local means. In addition to the remedies mentioned by him, we may add to the list the salts of copper, particularly the nitrate and the sulphate. The former we have applied with very beneficial results, and we think them less painful than others in ordinary use. Ointments may in some instances succeed, and Mr. Curling mentions that he employed with good effect one containing chloroform, in the proportion of from one to two drachms to half an ounce of cerate. In cases in which we are obliged to operate with the knife we prefer the convex-bladed scalpel, as recommended by the late Professor Colles. Ulcers of the rectum are not free from occasional constitutional complication, such as struma or syphilis, and when so they demand special treatment. It must also be borne in mind that more serious lesions may coexist, which should render our prognosis cautious; thus, we recollect a case where rapid and fatal peritonitis, from perforation of an ulcerated patch of the ileum near its termination, supervened, and where the prominent features of the case were an ulcerated fissure implicating the anus and the adjoining portion of the

rectum. The man, the subject of it, had been worn out and emaciated by the agony of the affection, and was admitted into hospital for its treatment on a Saturday; on the following Tuesday he was suddenly attacked, as above stated, and in twenty-four hours was dead. The only traceable lesion in the rectum was the ulcer, and an hypertrophied condition of its lining membrane.

2. *Hemorrhoids.*—There are many valuable remarks in this chapter well worth perusal, but we shall limit our notice to the observations on their treatment. Both as regards internal piles and the common external hemorrhoid, much is yet to be learned, and hence, perhaps, surgeons cannot boast as to their perfectly successful management. As regards the former, we have tried every description of caustic in their treatment: the mineral acids,—particularly the nitric, strong acetic acid, the acetum cantharidis, the tincture of the sesqui-chloride of iron, the potassa fusa, and various powders,—amongst others, with probably the best effect, equal parts of the red oxide of mercury and burnt alum, but we must say that the result has rarely been a cure, unless the size and character of the hemorrhoid favoured such treatment. Of all now named, the potassa fusa, or the potassa cum calce, is the most penetrating, but its action cannot be safely limited, and much pain attends its use. We have, however, most frequently applied the nitric acid; in some instances, as stated in the essay of the late Dr. Houston, and as confirmed by Mr. Curling, its application is almost painless, whilst in others we have seen it followed by most extreme agony, and by a train of constitutional symptoms by no means free from uneasiness to the practitioner, the nervous system being particularly implicated. We prefer for this application of the acid small, flattened pieces of wood, not too brittle, but yet thin, and shaped like a miniature boat-oar. It appears to us to be preferable to the glass pen recommended by the author; with it the acid can be well *soddened* into the tumour, and there is no risk of an overflow, which we have seen happen more than once with the pen. But, according to Mr. Curling, "for the cure of internal hemorrhoids of any considerable size, the ligature is the safest and most effectual remedy." Having given full directions for the mode of its application, in which we do not find anything to detain us, he says:—

"The extirpation of hemorrhoids by ligature is both an effectual and a safe mode of treatment, and the use of chloroform removes almost entirely the pain attending it. Those adverse to the plan have magnified the risks and sufferings, and have spoken of phlebitis, and tetanus, and diffuse inflammation followed by sloughing, as

common occurrences after the operation. No fatal case has come under my own notice, either in public or private practice. Some amount of danger must be incurred in every kind of operation, serious results sometimes arising from the slightest causes; and the tying of piles cannot be expected to be exempt from risks which may attend a trifling puncture in the finger. But an unfortunate result from the application of ligatures to piles is entirely exceptional; and with common precautions this proceeding must be regarded as safe as any operation in surgery."

Such view of our author is confirmatory of that of Sir Benjamin Brodie, as regards the treatment of hemorrhoids by ligature, but is altogether opposed to that of the Dublin school. In a few cases of internal hemorrhoids we adopted an expedient similar to that used in the treatment of ordinary nævi, and it appeared to answer extremely well; namely, passing through the tumour worsted cross threads, and loosely knotting them, and as the necessity arose, in the process of solidification, saturating these threads with sulphate of copper or nitrate of silver lotion: unquestionably the irritation produced was very tolerant and trifling.

We have now adopted, and with benefit, Sir Benjamin Brodie's plan of treating erectile tumours, namely, of puncturing with a small, narrow knife one of these hemorrhoids, immediately passing in a fine probe, armed with fused nitrate of silver, freely moving this about, and even leaving the small portion of caustic behind.

Of all the modes of treatment, however, we are most favourable to the actual cautery; we do not mean to assert that it is always successful, but we do believe it is more so than any other plan, and the idea of it is the worst feature connected with it. Mr. Cusack has, we think, an excellent contrivance for this purpose. It consists of a strong forceps, with flattened or spoon-shaped blades, having small holes for the passage of threads to secure a piece of chamois leather, which at the time of use is well damped with cold water, and which is of course shaped so as to cover the adjoining parts; with this flattened forceps the particular tumour is seized and secured, and then the iron, heated to a white heat, and shaped according to the size and form of the hemorrhoid, is steadily and firmly applied. One, two, or three, may be so treated in succession. In this step of the proceeding a certain amount of adroitness is requisite, so as to limit the action of the cautery, and immediately after the object is attained successive applications of iced or the coldest water should be employed. We have met with cases both in males and in females where this mode of treat-

ment absolutely gave less pain and more substantial relief than any others above named or described by the author.

Though much valuable matter deserving observation presses itself on our attention, we are compelled for the present to close here our notice of Mr. Curling's book, which we can recommend with much confidence. There will be found throughout it practical remarks of the highest importance, and, as we have said before, they are undoubtedly based on clinical observation. If, as regards some of the author's views, we entertain different opinions, we deem no apology requisite to one who evidently has at heart the advancement of his profession, and who is aware how much the canvassing of opinions on practical subjects, and particularly on their treatment, advances this object.

The Flora of Liverpool. By Joseph Dickinson, M. A., M. D., F. L. S., &c. London: Van Voorst. Liverpool: Deighton and Laughton. 1851. 8vo. pp. 166.

It is an excellent thing to make a perfect brick, although it may be more glorious to build a noble mansion. The architect may possess every necessary qualification, but unless provided with suitable materials, his genius becomes cramped in the execution of his most felicitous designs. Lords of the Admiralty are easy to obtain; the difficulty is to get a good Secretary. In truth, the qualities which render a man useful in the collection of details are more rare, in this world of ours, than those which would enable him to generalize. The faults of most systems have arisen from the falsity of the data upon which they are founded, rather than upon any deficiency of methodical arrangement in the authors. Bacon has shown us that facts, well observed and properly classified, constitute the stepping-stones of science; and due respect is consequently owed to their collectors.

Among the labourers of Natural Science, Dr. Dickinson has enrolled himself. This instance of volunteership is unfrequent and praiseworthy. Unfrequent, for we seldom find men engaged in the war of life, especially medical men in large practice, who have nothing to gain, but, it may be, much to lose by engaging in any extraneous pursuit, devoting their few leisure moments to the furtherance of science. Praiseworthy, because in the present case, the task which the author has undertaken he has executed well.

Local Floras are of great value, both in spreading and facilitating a taste for botany, and furnishing the materials out

of which the philosopher may be permitted to trace the mazes of Nature's plan. But "The Flora of Liverpool" is calculated to be more extensively useful than works of the kind usually are. It combines a catalogue of the habitats in which the various plants grow, with such an account of their geology and fauna as may prove of considerable benefit to sister sciences.

We thank Dr. Dickinson for his labours, and feel that works such as his are calculated to reflect credit and respectability on the profession of which he is an active member.

The New London Pharmacopœia, translated and arranged in a Tabular Form, with the Edinburgh and Dublin Pharmacopœias, showing at one View the Differences in the Formulæ of the three Colleges, together with the Tests given by each College for the Purity of the several Preparations, with Practical Remarks. By Peter Squire, M. R. I., &c. London: Churchill. 1851. 8vo. pp. 200.

The Prescriber's Pharmacopœia, containing all the Medicines in the New London Pharmacopœia of 1851, *arranged in Classes according to their Actions, with their Composition and Doses.* By a Practising Physician. Fourth Edition. London: Churchill. 1851. 32mo. pp. 132.

A Compendium of Materia Medica and Pharmacy, adapted to the London Pharmacopœia; embodying the new French, American, and Indian Medicines; and also comprising a Summary of Practical Toxicology. With the Abbreviations used in Prescriptions. By J. H. Lane, M. D., &c. Second Edition. London: Churchill. 1851. 24mo. pp. 310.

A Translation of the New London Pharmacopœia; including also the New Dublin and Edinburgh Pharmacopœias, with a full Account of the Chemical and Medicinal Properties of their Contents; forming a complete Materia Medica. By J. Birkbeck Nevins, M. D., &c. London: Longmans. 1851. 12mo. pp. 780.

Translation of the Pharmacopœia of the Royal College of Physicians of London, 1851. *With Notes and Illustrations.* By Richard Phillips, F. R. S. L. & E., &c. London: Highley and Son. 1851. 8vo. pp. 567.

For several reasons we have not noticed in this Journal the new editions of the Dublin and London Pharmacopœias which have been recently published. By the authority of old Acts

of Parliament and of Royal Charters, the power of regulating by a printed code the simple and compound medicines, to be kept by the apothecary and to be prescribed by the physician in the three great divisions of our *now* United Kingdom, is vested in the respective Colleges of Physicians of London, Dublin, and Edinburgh; and of this right each of these learned bodies continues still individually to avail itself. Of the wisdom displayed in their so doing but one opinion can exist. Does the physician or surgeon who may write a special treatise on disease, think it either politic or necessary to direct a special mode of treatment for an Englishman, an Irishman, and a Scotchman? And yet, in their corporate capacity learned physicians persist in ordering special combinations of drugs for each, nay, even *special weights* for the compounding of medicines. The absurdity of this is too glaring, and has been too often commented on to require any argument from us now; and we merely notice it in the hope that, ere another edition of any of our three Pharmacopœias be demanded, the Colleges of Physicians will, without waiting for legislative interference, which must come sooner or later, themselves take steps to correct what every individual member of each College admits to be a great evil.

With a due respect, however, for the parliamentary authority by which the power now exerted is conferred, we shall say no more on this head; an authority which, moreover, inclines us to be silent, no matter what our personal opinion may be, as to the manner in which the duty thereby intrusted has been and still is executed. We have always had a salutary dread of Acts of Parliament, and this dread has been much augmented lately by the bold attempt of the compiler, and assignee of the copyright, of the last edition of our own Pharmacopœia to monopolize the right of publishing what was evidently intended to be public property, and to check the diffusion of what he, at least, must have believed to be useful knowledge. The futility of such an attempt in the present age, when every encouragement is given to the schoolmaster to be abroad, has been, in this instance, proved by the result, and we should not have noticed it, but to tender our thanks, on the part of the Irish members of the profession, to the Editor of the Pharmaceutical Journal of London[a], and to the Reviewer in the Monthly Journal of Medical Science[b], for the able manner in which they exposed this illiberal proceeding.

A direct consequence of the difference that exists between

[a] Vol. xi. p. 433. [b] Vol. xii. p. 50.

the three British Pharmacopœias is the necessity which the practitioner feels for a class of works in which, in addition to the usual information contained in text-books on Materia Medica, these discrepancies should be clearly pointed out; and therefore, on the publication of a new edition of any of our Pharmacopœias, numerous works of this character are announced. The almost simultaneous appearance within the last year of both a London and a Dublin Pharmacopœia causes a more than usually abundant issue of such books from the Press, some of high character, and others of extreme inferiority, and we purpose now to give our readers, in as few words as possible, an insight into the merits and demerits of those amongst them which have attracted our notice.

1. The first and most deserving of attention on the list is Mr. Squire's Tabular View, in which a want that we ourselves, and we doubt not most of our readers, have often experienced, is most ably supplied. In it the practitioner and the apothecary are presented at a glance with the differences which exist in the formulæ of the three British Colleges, a matter of vast importance and great convenience "when," to use Mr. Squire's words,

> "Patients are travelling from one part of the kingdom to another with such rapidity, a prescription written in London may be prepared in Edinburgh or Dublin the following day, and with widely different results; each College adhering to its own formula in dispensing. Now Acetum Opii of Edinburgh is *three times* the strength of Acetum Opii of Dublin; and Acetum Colchici of Dublin is *three times* the strength of Acetum Colchici of Edinburgh and London. Acetum Cantharidis differs in strength in all three, in the relation of 2, 3, and 4. Acidum Aceticum of London contains 31 per cent. of real acid, whilst Acidum Aceticum of Edinburgh contains as much as 85 per cent., nearly *three times* the strength. The above remarks are confined to the two first pages in the tabular arrangement, and are calculated to arouse attention, and put the prescriber on his guard with his travelling patient."

In the first page a table of the weights and measures employed in the three Pharmacopœias is given: the fluid measures now directed to be used correspond in all, but the weights unfortunately do not, owing to what we must characterize as a most injudicious and unnecessary change made by the Dublin College in the substitution of a *modified* avoirdupois scale—neither legal nor in ordinary use—for the old apothecaries' weight, from some fancied idea of conveniencing the chemist and the compounder.

This is followed immediately by a complete Materia Medica list, containing all the substances so placed by the three Colleges, excepting a few that have been introduced for comparison into the tabular arrangement of the body of the work; and here also are given the tests of the London and Edinburgh Pharmacopœias,—none are contained in that of Dublin. Of course this portion of the volume is simply a compilation, but it appears to us to be well and carefully executed.

The remainder of Mr. Squire's book is devoted to his tabular plan of the Pharmacopœias. In it he adopts the alphabetical arrangement, which, for its simplicity and convenience of reference, we much commend in a work of this nature. Every page is divided into three columns for the three British Colleges, and the corresponding formulæ of each, where they differ, are given at length, an explanation of the differences in the resulting compounds being appended; but an example will exhibit the plan adopted much better than words, and with this view we select the very first preparation in the book:—

LONDON.	EDINBURGH.	DUBLIN.
	ACETUM CANTHARIDIS.	
		AVOIRDUPOIS WEIGHT.
Cantharides in fine powder, 2 oz.	Cantharides powdered, . 3oz.	Cantharides in fine powder, 4oz.
Acetic Acid, . . . fl. 20oz. (*containing* 30 *per cent.*)	Euphorbium, coarsely do., ½oz.	Acetic Acid (51 *p. cent.*), fl. 4oz.
	Acetic Acid (85 *p. cent.*), fl. 5oz.	Acetic Acid of comm., fl. 16oz.
	Pyroligneous Acid, . fl. 15oz. (21 *per cent.*)	(Sp. Gr. 1·044—28 *per cent.*)
Macerate 8 days, frequently shaking.	Macerate 7 days, strain,	Macerate 14 days,
Press and strain,	Express strongly and filter,	Express through flannel, and filter,
Resulting acid, 30 *per cent.*	*Resulting acid,* 36 *per cent.* 50 *per cent. stronger of flies than London.*	*Resulting acid* 33 *per cent. Twice the strength of flies to that of London.*

In our occasional references to this work, during the short time that has elapsed since its publication, we have detected a few errors which we point out to the author with the view of their correction in his next edition. Thus, at page 5 he states, that the hydrocyanic acid of the Edinburgh Pharmacopœia contains 3·98, instead of 3·3 per cent. of real acid; and that the Dublin preparation is rather stronger than the London, while they are of the same strength, each containing 2 per cent. At page 85 in the Dublin formula for the solution of muriate of morphia, a drachm and a half avoirdupois (82 grains) is the quantity ordered, while the College directs 90 grains; this mistake evidently arose from the author's forgetting the change in the weights; one fluid ounce, therefore, contains 4½ grains of the salt, and not 4 grains, as he states. In the for-

mula for the arsenical solution, at page 87, under the Dublin heading, 82 grains each of arsenious acid and carbonate of potash are ordered instead of 72 grains, but the mistake here is not to be ascribed to Mr. Squire, for the change was made in a reprint of the Pharmacopœia issued after the number of copies first printed was sold off;—illegally made, too, if there is any value in the proclamation of the Lord Lieutenant in Council prefixed to the first publication. And a few others of scarcely sufficient import to notice.

We have also stumbled on some uncorrected errors of the press, unavoidable, indeed, in a work in which so many medical signs occur; for example, in the formula for belladonna ointment, ℥ ½ instead of ℥ ½ of lard is ordered.

To each of the preparations Mr. Squire has appended short observations intended to indicate its dose and uses; these we think would have been much better omitted. They are too concise to prove of much value even for counter practice, and being compiled by a pure chemist, though one of the very highest character, are too frequently incorrect. Of this the following are a few illustrations:—At page 53 it is observed, that "good scammony would be deteriorated" by the process of the Edinburgh College for preparing the extract or resin, and the dose of it is said to be "5 to 10 grains." Now this is a most useful and active preparation, possessing the great advantage of being perfectly miscible with new milk without imparting to it either odour or taste, and therefore especially applicable for children; the minimum dose of Mr. Squire, 5 grains, is our maximum, and one we have found sufficiently active for the most obstinate bowels; indeed, from our experience of the action of resin of scammony, we should fear the production of hypercatharsis from the administration of 10 grains. At page 94 the aromatic iron mixture of the Dublin Pharmacopœia is called "an *unpopular* preparation." At page 132, under the heading, Syrup of Hemidesmus (Indian sarsaparilla), which has been introduced into the last Dublin Pharmacopœia merely for its very agreeable odour, it is remarked, "hemidesmus was much prescribed twenty years ago, and found *very efficacious* in some skin diseases [!]; at present it is not much employed." At page 162 the use of Elemi ointment is said to be "to keep open issues and setons," no mention being made of its employment as a stimulating dressing to old or indolent ulcers, for which purpose it is chiefly used and highly prized by many surgeons. Nevertheless, Mr. Squire's volume is a very useful publication, and we strongly recommend it as an almost indispensable table-book for both the prescriber and the compounder.

2. The Prescriber's Pharmacopœia is a minute *reading-made-easy* of the London Pharmacopœia, and therefore adapted for English circulation only; its long title sufficiently explains its contents. Although it has reached a fourth edition we must say that we altogether disapprove of its scope and manner of execution; yet we cannot deny that it may at times prove of assistance to a careless and lazy practitioner.

3. Dr. Lane's Compendium is an imitation of the well-known and useful Conspectus of the late Dr. Anthony Todd Thomson, to which we regard it as inferior in every respect, and especially as not containing the preparations of the Dublin and Edinburgh Colleges.

4. Dr. Nevins states in his Preface that the design of his work originated from his "experience, while engaged as medical tutor in Guy's Hospital, of the difficulties and wants of students in preparing for their examinations," and that "he has kept these prominently before his mind in the execution of the work." He thus honestly confesses that his book is written for the student of medicine, and from his own experience gained as a medical tutor. This might probably disarm the critic, or at least throw him off his guard; but, in a further paragraph, the author declares his object to have been to "write a book on the properties and uses of medicines," with the view of offering the practitioner also "a complete compendium." Now for whichever of these classes we regard this volume as being intended by its author, *impartial* criticism compels us to say that it is deficient in purpose, and bad in execution. Its deficiency consists chiefly in its imperfections and incompleteness, and its badness arises from carelessness of style, looseness of statements, and glaring errors, in the latter of which the book abounds. We regret to be obliged to utter this sweeping censure, and we assure Dr. Nevins that our own feelings would have induced us to pass over his work in silence, were it not for the manner in which he has invited our criticism.

Though unwilling to occupy space, which in our present Number we much require, we feel bound to substantiate the charges we have brought against this book; and we shall therefore adduce some proofs in illustration of their truth. This, however, we will do as briefly as possible, not, we assure our readers, from a lack of abundance of matter to convict the author out of his own mouth, but from a desire not to take up too much of their time in such a fruitless inquiry, and in truth, also, from an indisposition on our own part, for the task which,

as we have before said, has been to a great extent forced upon us.

The *imperfections* and *incompleteness* of the work,—which professes to "include the new Dublin and Edinburgh Pharmacopœias, and to form a *complete* Materia Medica,"—are easily proven. Thus, in but some instances are the formulæ of either of these Colleges given in full; for many preparations they are extremely condensed; for some, the proportions ordered are given, and the directions for using them left out; and for a very large number they are omitted altogether. For example, if we take the first section in the book, "Acids," we find the following processes are omitted:—Acidum Aceticum Glaciale, D.; Acidum Aceticum Forte, D.; Acidum Aceticum, E.; Acidum Benzoicum, D. (a very important process); Acidum Citricum, E.; Acidum Gallicum, D. (two processes are given in the last Dublin Pharmacopœia); Acidum Muriaticum Purum, D.; and Acidum Nitricum Purum, D. We might have selected a much more complete illustration, but this proves sufficiently that Dr. Nevins' book does not "include the new Dublin and Edinburgh Pharmacopœias," and is therefore insufficient for Irish and Scotch practitioners or students. It is not a "complete Materia Medica," for no botanical description, either general or scientific, of medicinal plants is to be found in it, and their chemical composition is very incompletely given. The *composition* of aloes, for example, is disposed of in the following paragraph: "*Aloësin* (saponaceous matter, a bitter principle), *resin and aloëtic acid.*" Piperin is mentioned as "a crystalline substance;" but not the least notice taken of its valuable antiperiodic properties, a matter of such great importance in the present scarcity of quina. Cetraric acid, another valuable antiperiodic, is similarly treated. But it is as regards the *medicinal properties and uses* of each substance that the imperfections and incompleteness of the book are chiefly manifested: thus, among many other omissions, no mention is made of Dr. Fleming's researches under the head of Aconite; of Donovan's or Alexander Christison's, under Indian Hemp; of Kerr's, under the pernitrate of iron; of Maclagan's valuable method of treating blistered surfaces; or of Corrigan's plan of using the heated iron, although the practice of firing is described: the special effects of Gallic Acid in hematuria are unnoticed; of the *cold douche* in poisoning with prussic acid; of iodide of lead in cancer; of opium in rupture of the stomach, the intestines, or the uterus, or of its combination with tartar emetic in delirium tremens.

Of Dr. Nevins' *carelessness of style*, a few specimens will

suffice: page 128, "*Diseases* in which chloroform has been administered,—*Midwifery;*" page 131, "Chloric ether, *Dose,* min. xv. to min. xxxv. *combined with anything;*" page 180, "Treatment of Leeches:—It has been advised to cut the leeches in two after they have begun to suck, if they are very scarce, for they then continue sucking without falling off, as the blood escapes at the same time; *after this they will not require much treatment;*" page 199, "Dose, for children, one spoonful *taken at twice;*" page 220, "Confectio Terebinthinæ, D., it is difficult to conceive on what principle this confection has been made, the oil of turpentine being nasty enough of itself, *without the torture of having to suck it down like jam;*" page 261, "*Taking tobacco as a quid;*" page 361, "Nitrate of silver: it is decomposed by *so many things* that it ought never to be dissolved *in anything* but distilled water;" page 443, "This peculiarity of habit is called idiosyncracy, *because we do not understand it;*" and at page 753, in the list of emetics, *tickling the throat* is enumerated, and its characteristics are said to be *always at hand.* These specimens of style do not require a word of comment; the Italics are ours.

The author's *looseness of statements* in most instances are evidently caused by ignorance of the subject on which he has undertaken to write: that this is so we have evidence in almost every page of his book. Thus, "strong nitric acid" is stated at page 93 to be a "valuable *disinfectant;*" at page 103, sulphuric acid is said to be "usefully prescribed along with sulphate of magnesia, as an aperient;" at page 152 it is affirmed that "*Egyptian and Constantinople* opium are merely inferior varieties of Smyrna or Turkey opium;" at page 153, that "Thebaia is *inert;*" at page 189, that cherry-laurel water "is very seldom used in medicine," and that its dose is "from ʒss or ʒj to above ʒj, several times daily." The *poisonous* dose here laid down—in a book, too, intended for students—contrasts strangely with the uselessly small quantity he gives of mustard as an *emetic:* "repeated doses of a tea-spoonful in an ounce of water." At page 272 it is stated of belladonna that "the extract is the only form which is used internally;" at page 359, "that only two or three instances" of blue coloration of the skin from the internal use of nitrate of silver "are recorded." At page 397, the following statement and conjecture appear: "the chief purpose for which iron filings are used is to destroy the small thread-worms; perhaps they act by causing the evolution of hydrogen in the bowels, which kills the worms." At page 511 it is said that "moisture is the only adulteration of iodine against which the Pharmacopœias provide a test," although

the entire tests of the Colleges are quoted in the preceding paragraph, in which its sublimation and solution in rectified spirit (the tests against fixed impurities) are directed; and at page 612, "a white liver" is said to be the "gin-drinker's liver."

The *errors* contained in the volume are numerous: Gamboge is said to be obtained from Ceylon; Cusparia from the West Indies; Jalap from Brazil; *Jamaica* Sarsaparilla from the *East* and West Indies and Brazil; *American* Turpentine from the North of Europe, &c., &c. "Magnesia, and the carbonated alkalies" are affirmed, at page 104, "to be not so good antidotes as chalk" in poisoning with sulphuric acid, "inasmuch as they form purgative, and thereby depressing and irritating compounds." Is Dr. Nevins ignorant that chalk forms with sulphuric acid the *insoluble* compound, Plaster of Paris? In the observations on Cataplasma Carbonis, L., at page 193, the following remarks occur: "It is not specified by the College that *animal* charcoal is to be employed, but it is of consequence to attend to this point, as vegetable charcoal is almost useless." Surely Dr. Nevins could never have seen a charcoal poultice applied, or he would not commit this gross blunder to print; did he never hear of peat charcoal, and its deodorizing properties? In commenting at page 397 on Ferri Pulvis, D., Dr. Nevins observes, "As it never is nor can be used in medicine, the student must refer to some work on chemistry for the details of the process;" and yet this is a preparation which has been not only used but highly recommended by some of the most eminent French therapeutists for some years back, under the name of *Fer réduit.*

But we really cannot pursue this unpleasant and irksome task any further, nor should we have multiplied the proofs so far were it not that the book has been highly lauded by some of our contemporaries, how justly our readers can now judge, and yet we have not exhausted a fourth part of the references we had noted as containing positive errors, often, too, of the greatest importance.

Throughout the volume some singular statements as to the action and doses of medicines are made on the authority of others, and the reference given in foot-notes to the books in which they are to be found; one of these only have we taken the trouble to test the correctness of, and in that instance we discovered that Dr. Nevins had committed a most serious error; he says, at page 104, "Dr. Thompson has found the diluted acid [sulphuric], when given to the extent of ℥j daily, successful in curing obstinate scabies." Now, on referring to the columns of the Lancet, from which this quotation is professed to

have been made, we find that the extreme quantity administered by Dr. Thompson was ʒj three times daily.

Dr. Nevins, it would appear, from some scattered observations in his book, was for some time a student in the Dublin school —we hope it was not here, at all events, he acquired his knowledge of Materia Medica—and hence assumes to be very learned on Irish questions; as, however, some of his remarks are entirely novel to us, we shall give our readers the benefit of one or two of them:

"Whiskey," he says, "produces a more lively form of intoxication than the last two [brandy and rum], and it does not continue so long, and is very seldom followed by headache or disordered digestion. It used to be the boast of the Irish, that 'there was not a headache in a hogshead of whiskey.' It rather promotes than checks the secretions, especially that of the kidneys. It was very remarkable, that not a single case of delirium tremens fell under the notice of Sir H. Marsh, Dr. Graves, or Dr. Stokes, amongst the Irish, at the time when nearly the whole nation suddenly became tee-totallers." [!!]

In our last Number we published a paper by Dr. Moore, on the origin and use of the word "Hippo" in Ireland; but it was left for Dr. Birkbeck Nevins to inform us that it was also latinized by Irish physicians—he surely must have dreamt it—for at page 591 of his volume he gives, as a "*Dublin* synonyme" of Pulvis Ipecacuanhæ Compositus, "Pulvis Hipponis Compositus;" we might say of him here, at least, *Hibernis ipsis Hibernior.*

5. A new edition of the valuable Commentary of the late Mr. Phillips on the last London Pharmacopœia has just reached us; we can truly say that it is in every respect equal to its predecessors, and we can give it no higher praise. The history of this book is a singular one. In 1811 Mr. Phillips published a criticism on the London Pharmacopœia which had appeared in 1809, and so true were his critical observations believed to be by the College, that the amendments which he suggested were, to a great extent, adopted in the edition of 1815. The preparation, however, of this, which he aimed at, was not intrusted to him, and in 1816 he again published a just but severe criticism on it. In 1824 a translation, with a commentary, of the Pharmacopœia of that date appeared from his pen, and in every edition which has since appeared, including the present, he, to use his own words, "conducted or inspected the preparation of most of the medicines which have been introduced, or the method of preparing which have been altered." His commentary is thus an authorized one. Ere the present

edition of it, however, was completed for the press, death snatched him off in a green old age, while in the midst of his labours. His book, nevertheless, has lost nothing, for it has been well edited by one of his pupils, an able chemist in every way fitted for the task, Mr. J. Denham Smith.

The Anatomy and Diseases of the Prostate Gland. By John Adams, F.R.C.S.I., Surgeon to the London Hospital, &c. London: Longmans. 1851. 8vo. pp. 160.

Considering the variety of morbid lesions which the prostate gland displays, and reflecting on the urgency of the symptoms indicating acute inflammation of its structure, with the mischief often resulting from suppuration; the universality of senile enlargement of it, the consequences of which, present and remote, are so distressing and dangerous; the intractibility of scrofulous disease existing in it; the hopelessness of its malignant degeneration; not to mention the unhappy results to which (what may in contra-distinction be termed) its functional derangements lead, we observe the fullest grounds for investing the study of the affections of this gland with deep pathological interest, and with the highest surgical importance. Requiring a careful and rather minute inspection, this small body is often overlooked in the researches of the morbid anatomist, while the circumstances under which it is placed as regards position in particular, and the difficulty from obvious causes which exists in the disclosure of its functional derangements, are calculated to preclude its diseases from an accurate and scientific diagnosis.

The author of the work bearing the above title comes before us without any boastful announcement of an intention to throw important new light upon his subject, but he has, nevertheless, furnished the profession with a highly useful treatise upon prostatic disease in general, and the character of which must tend in no small degree to uphold that reputation which he has already deservedly earned.

The first chapter is devoted to an account of the anatomy and physiology of the prostate gland; and the second commences with a description of acute inflammation of the organ. Acute prostatitis is well known to be, in nine cases out of ten, the result of acute gonorrhœa, particularly in cases where strong measures have been adopted to check the discharge. A young person of irritable constitution contracts gonorrhœa, and in his anxiety to rid himself of a very disagreeable annoyance in as

short a period of time as possible, employs strong injections at an improper stage of the disease, while he at the same time pursues, without restriction, his former mode of life and habits: the result is that, instead of the inflammation lessening, it becomes heightened, and, transgressing the specific distance, it extends to the prostatic part of the urethra and neck of the bladder, producing the urgent and distressing symptoms of irritability of that organ. If the appropriate treatment be not now energetically put in force, symptoms of a much more serious import supervene, announcing that the inflammation has been propagated from the mucous membrane to the prostate gland itself.

There is one point of considerable practical importance connected with chronic prostatitis to which Mr. Adams draws particular attention; it is the frequent implication of the prostate gland in cases of long-continued gleet; and he considers that, in many instances, the discharge is entirely due to an increased and altered secretion of the follicles of the gland. He shows, very properly, the inutility of employing injections in cases of gleet depending upon the cause now mentioned, and extols Chian turpentine as possessing quite a magic influence over it, which circumstance he attributes to its exercising a specific action upon the prostatic part of the urethra, and on the prostate gland itself. We have found Chian turpentine of marked benefit in urethral discharges of various kinds, as well in the sub-acute stages of gonorrhœa as in that form of gleet dependent upon irritation of the prostate gland; but we cannot say that it displays as much power over the latter disease as the author's remarks would lead us to suppose. The medicine is of uncertain efficacy in all cases for which it is employed, and will rarely, according to our experience, exhibit its curative effects "instantly" in any.

Mr. Adams next touches upon "prostatitis from onanism," a subject as important as it is delicate, and which, from being culpably overlooked by those who study their profession scientifically, has come almost entirely within the domain of the ignorant empiric. To Lallemand the profession is certainly indebted for the light which his careful investigation of cases has thrown upon this important subject; but his views, upon the whole, are very partial, and he has left considerable room for further practical information. The author draws an important line of distinction between spermatorrhœa the result of chronic prostatitis, and that, the consequence of an irritable state of the prostatic part of the urethra induced by the disgusting practice of onanism; and it is of much moment to attend to this point of distinction, as the treatment of the two

cases materially differs. No doubt prostatitis is, as Mr. Adams remarks, frequently attributable to onanism; but if we are to cure the spermatorrhœa we must remove the inflammation of the organ.

When frequent involuntary emissions are the result of an irritable condition of the prostatic part of the urethra, there is no plan we have found so effectual as the occasional introduction of a bougie. Very often the state of the urethra is more than that of irritation, for it amounts to chronic inflammation. In such cases if we employ a moderate-sized instrument we shall often experience some resistance just as the bougie arrives at the prostate gland, such as would be produced by a thick fold of the membrane; the patient, too, at, this part of the operation, starts with pain, which in some instances is described as sickening, being followed by faintishness and a tendency to nausea. If there be no obstruction we should at once apply the nitrate of silver to the prostatic part of the urethra; if there be, the probability is that the use of the bougie will, *per se*, remove the irritable state of the canal, and thus cure the emissions. Under any circumstances the caustic can be employed with greater ease after the obstruction has been overcome. In addition, Mr. Adams recommends the administration of conium, and the use of cold water injections per rectum, and judiciously alludes to the great necessity that exists for observing moral treatment.

But of the various diseases of the prostate gland the most important for the study of the surgeon is the senile enlargement or hypertrophy of the organ, because it is so common in occurrence, and because the consequences to which it leads so frequently demand his promptest assistance. Though it is an affection well known to be beyond curative treatment, still it can, by proper measures, be greatly retarded in its progress, and its symptoms, when urgent, be mitigated.

The author gives a systematic, but perhaps too brief and superficial, account of the symptoms, morbid anatomy, etiology, and treatment of this affection, still, many of his observations exhibit a sound, practical knowledge of the subject. After marking the different alterations in the character of the urine, corresponding with the different stages of prostatic disease, he alludes to the pathological changes in the state of the bladder. For the varying capacity of that viscus in cases of enlarged prostate he attempts to offer what he conceives to be a plausible reason, viz., that when it is contracted in size there has been inflammation of the prostate extending to the bladder, whereas when it is enlarged, that this condition is not found

to exist. It occurs to us that this supposition is not at all necessary to account for the pathological condition to which we allude, for whether the bladder be diminished or increased in capacity must depend upon whether the prostate gland is so circumstanced as to act as a foreign body continually keeping up irritation, or to offer such effectual resistance to the escape of the urine that there must be a permanent state of distention of the organ. In some instances, where there is not the slightest indication of the presence of inflammation, the irritability of the bladder is so great that the individual cannot retain his urine for fifteen minutes consecutively without experiencing great pain and distress, while there are other cases in which the existence of inflammation is unquestionable, but where a distended bladder, coinciding with retention of urine, is the condition present.

Mr. Adams draws especial attention to what has been termed "the fluttering blow of the bladder," and urges the necessity of attending to the nature of this phenomenon, so as to avoid mistaking it for the evidence of stone in the bladder. We have at present a gentleman under our care for enlarged prostate, in whom the phenomenon is most remarkably distinct, and who might most readily be considered to be the subject of calculus in the bladder. Upon introducing a catheter, which passes with ease, and drawing off nearly all the urine, two sudden, abrupt taps are distinctly felt against the extremity of the instrument, then, upon withdrawing it for a short distance, just as the remainder of the urine is expelled, the same sensation is again communicated to the hand. We have no doubt that in this case a vesical pouch or pouches exist, which are the cause of the peculiarity mentioned.

There is no pathological change which has baffled more completely a rational conjecture as to its cause than hypertrophy of the prostate gland, because the nature of that change is contrary to analogy in all other respects. When the animal machine is fast declining, when in all other parts and organs nutrition no longer counterbalances decay, and in some complete atrophy exists, it is then the prostate gland exhibits a perfectly opposite tendency, and passes into a state of hypertrophy. Mr. Adams leans to the idea that the cause of this remarkable change may be found in the venous congestion which is generally met with around the prostate at the middle period of life, but we cannot think that this explanation is in the least satisfactory; and indeed we conceive that if venous congestion holds any necessary relation to enlarged prostate gland, it is rather the effect than the cause of the hypertrophy.

As regards the treatment of hypertrophy of the prostate gland, we believe the great secret in giving relief, and delaying the progress of the disease, consists in the regular and judicious employment of the catheter. The affection seldom lasts for any time without preventing the complete evacuation of the contents of the bladder; every time the patient makes water some fluid remains behind. This circumstance soon leads to inflammation of the mucous membrane of the bladder, and it is then that the urgent and distressing symptoms belonging to the disease occur. Now, when the urine is regularly and completely evacuated by artificial means, these latter symptoms will be found to be greatly postponed. In giving his preference to the horizontal posture for the introduction of catheters, Mr. Adams assigns the following reason. He says:

"Where the third lobe is much enlarged, and constitutes the cause of retention, when the patient is erect it falls forward, and, impinging upon the apex of the catheter, prevents the instrument from passing into the bladder; whereas, if the patient be laid on his back, the third lobe falls backwards, and the instrument glides freely onwards without impediment."

We do not exactly understand this explanation. If Mr. Adams means by the phrase "falling forwards and backwards" that the middle lobe is sometimes pendulous, his statement is perfectly correct; but we cannot understand how position can materially affect it, for, even allowing that the lobe falls forwards when the individual stands in the erect posture, its very pendulousness would prevent its offering any effectual resistance to a catheter such as is usually employed in prostatic cases. On the other hand, if he means that the direction of the prostatic part of the urethra is influenced by position, then we fully coincide in his view. Every surgeon must have observed, that in many cases besides those of enlarged prostate—in strictures situated in the prostatic part of the urethra and in obstructions at the neck of the bladder—attention must be paid to position, to succeed in introducing an instrument. The direction of the canal differs greatly in the horizontal and the erect posture, and as we cannot ascertain beforehand the exact alteration which the morbid lesion has produced upon the canal, so as to determine which position to observe, it is better, as Mr. Adams remarks, always to attempt the introduction of the instrument first in the horizontal posture, and if we fail in our attempt, then to resort to the expedient of placing the patient in the standing position.

The author next passes to the consideration of scrofulous

disease of the prostate gland; and from thence to cancer of the organ, prostatic calculi, neuralgia, and what has been termed dilatability of the prostate. Upon these several points Mr. Adams makes many useful and instructive remarks, the study of which we strongly recommend to our readers; and we only regret that we are at present unable to devote to them a special consideration.

An Address to the Belfast Medical Society. By Robert Stephenson, M. D., &c., &c., President. Belfast: Ward and Co. 1851. Pamphlet, pp. 20.

The History of the General Hospital, Belfast, and the other Medical Institutions of the Town. By A. G. Malcolm, M. D. Belfast: Agnew. 1851. 4to. pp. 139.

Our Irish northern metropolis is unceasingly furnishing proofs of rapid advancement in both commercial and literary pursuits, keeping on a par with the gigantic and rapid strides of the nineteenth century, and with willing heart and working mind deservedly obtaining for itself the motto of "*Nulli secundus*" in the British Empire. As regards medicine and the medical sciences, our pages for the last two years have afforded sufficient testimony of the truth of this observation; and we have now to notice additional evidence in the publications before us.

The first is an excellent and truly professional address, which we can warmly recommend to our readers. It abounds in kindly feeling and valuable precepts in both the science and ethics of medicine, which were addressed by Dr. Stephenson to the Belfast Medical Society on his assuming its Presidential Chair.

The second we look upon both in composition and execution as a specimen of the manner in which such a work should be written. The author has contrived, while undertaking to present but the annals of an hospital, to compile an interesting and most readable volume, interlarding his pages with an outline history of Belfast, from the earliest ages to which its foundation has been traced to the present time, containing notices of its chief institutions and most celebrated public and professional citizens.

PART III.

MEDICAL MISCELLANY.

REPORT

ON THE PATHOLOGICAL MUSEUM OF THE BELFAST MEDICAL SOCIETY.

BY A. G. MALCOLM, M. D.,

ONE OF THE VICE-PRESIDENTS OF THE SOCIETY.

(*Continued from p. 477, vol. XI.*)

THE following illustrations of disease were for the most part received since the 1st May, 1851:

DISEASES OF THE BRAIN.

*22[a].		Hemorrhage into the arachnoid.
*23.		Arachnitis; effusion.
*24.		Cerebral congestion.

DISEASES OF THE LUNGS.

25.	Prep. 233.	Phthisis and pleuritis.
26.	,, 1.	Phthisis and pneumo-thorax.
27.	,, 227 and 229.	Phthisis; ulcerated intestines.

DISEASES OF THE HEART.

28.	,, 230.	Dilatation and valvular disease.
29.	,, 234.	Hypertrophy of the heart; aortic valve disease.
30.	,, 4.	Acute pericarditis.
31.	,, 235.	Hypertrophy with dilatation.

DISEASES OF THE KIDNEYS.

32.	,, 226, 231, and 232.	Bright's disease; phthisis.
*33.		Bright's disease; emphysema.

MISCELLANEOUS.

34.	,, 2.	Disease of the gall-bladder.
35.	,, 3.	Intussusception in an infant.
*36.		Acute peritonitis.
*37.		Acute purpura.
*38.		Lumbar abscess, communicating with the rectum; phthisis.

[a] The specimens marked thus (*) were not preserved.

XXII.—Hemorrhage into the Arachnoid.—Isabella M'Master, aged 42, was admitted into the General Hospital, Belfast, on the 28th November, 1851, in a perfectly insensible state. The prostration was complete; the respiration noisy; the pulse quick, feeble, and compressible; tongue brown and dry; and there were sordes on the teeth. The surface of the body exhibited various bruise-marks; and the legs were somewhat œdematous. The abdomen presented a natural appearance.

She died in a few hours, and was examined in twelve hours afterwards. On opening the arachnoid, situated over the right hemisphere, there was observed a large quantity of coagulated blood, which evidently produced an indentation of the convolutions of that side. No other organ (although all the cavities were examined) presented any diseased appearances. This patient, it was afterwards ascertained, had been drinking to excess, had fallen down a staircase, and received other contusions. The case is interesting in having presented during life several well-marked symptoms of fever with cerebral complication, which, in the absence of the information afterwards arrived at, rendered the diagnosis obscure.

XXIII.—Arachnoid Effusion.—Agnes Cochran, aged 48, of slender conformation, was admitted on November 5th, in a state of active delirium, with the face flushed, the pulse 84, and weak; tongue furred, and skin natural. No history could be obtained, further than that it was reported, that she had been in the habit of drinking to excess. The delirium remitted on the 7th. Diarrhœa, with rice-water evacuations, ensued on the 11th. Prostration, with a comatose condition, soon supervened, and she expired early on the morning of the 16th. On examination, the total amount of effusion was found to be not less than half a pint. A white gelatinous fluid was observed between the arachnoid and pia mater, and the sinuses were filled with dark blood.

XXIV.—Cerebral Congestion.—The subject of this case was a pedlar, named Francis Loughran, aged 47, of moderately stout appearance. He presented himself on February 15th, among the extern patients, being assisted in walking by a friend. As he could scarcely articulate, his companion stated, that he had been two weeks ill, and that he was previously healthy; his illness commenced with a febrile state, which confined him to bed; and he had been "up and down" for the first ten days. During the last four days he complained of weakness of the limbs, with numbness, some deafness, and constant headach. His speech became affected during the last twelve hours. On admission, his pulse was very quick and feeble; his tongue white; his respiration quick and anxious; his expression idiotic; and his mental state delirious at times. This condition became more aggravated, and he died comatose on the following day.

The brain alone was examined, and presented general congestion, with some arachnoid and ventricular effusion. The body was rather stout than otherwise.

It is plain from the examination and history of this case, that had he been seen earlier, antiphlogistic treatment might have saved him; but, as it was, he never even rallied from the state of prostration in which he was when admitted.

XXV.—Phthisis pulmonalis; Pleuritis.—This case occurred in the person of a soldier's wife, aged 26, who had been ill for ten months previously to January 27th, 1851, the day of admission, affected with the usual symptoms of cough, dyspnœa, expectoration, hemoptysis, night sweats, diarrhœa, and progressive emaciation; and latterly, she had œdema of the lower limbs. She died in the course of ten days; and the body, examined on February 7, thirteen hours after death, presented, in the thorax, very large cavities in the upper lobes of both lungs, especially of the right, which was bound down by exceedingly dense pleuritic adhesions. The inferior portions were infiltrated with crude tubercle. The mesenteric glands were tuberculized, but the intestines presented a normal appearance.

XXVI.—Pneumo-thorax and Phthisis.—The morbid parts exhibited are the right lung and pleura, with part of the thoracic walls attached. Two large cavities are seen open, one in the apex and the other in the middle lobe. The communication was situated posteriorly between the pleura and the upper cavity. Many old adhesions and bands are observed, particularly at the apex. The body of the lung is filled with crude tubercles.

The history is briefly as follows:—Mary Higgins, aged 11, of clear and fair complexion, and decided scrofulous constitution, hereditary and otherwise, was first seen on September 23rd, 1850, having been then ill six months. For three months she complained simply of slight cough and persistent debility. Dyspnœa and thoracic pains, especially of the right side, and dyspeptic symptoms, characterized her illness; and during the last two months, decubitus was confined to the right side. On the evening of the 29th March following, while sitting on the night-chair, she was *suddenly* seized with a great faintness and feeling of sinking. The muscles of the face became convulsed, her colour ghastly, and her respiration exceedingly embarrassed. Two hours elapsed before the respiration became even tolerably calm. For three days the dyspnœa continued, and a marked prominence of the right side, which yielded a tympanitic sound, was observed. The least movement to the left side, or even to the supine position, induced the most urgent breathlessness. She expired on the 2nd April, after an illness of thirteen months.

Besides the disease of the right lung mentioned above, the *left* was tuberculous throughout, with cavities and masses, but presented no adhesions. The liver was hypertrophied, and exhibited the nutmeg appearance, and about a quart of serous fluid was removed from the peritoneal cavity. The mesenteric glands were universally tuberculous, and even several of the lacteals could be distinctly traced, studded with tubercular deposit. The entire tract of the small intestines presented ulcerations, especially in the ileum,

in which the glands of Peyer were deeply engaged, in some extending to the peritoneal coat. The ulcers had thick and rugged edges, and were more or less covered with tubercular matter. The colon was partially affected; but the rectum was almost one mass of ulceration, so thickly set were the spots of disease. The remaining organs were normal. The moment of perforation was readily defined in this case, which presents an admirable specimen of the varied lesions in combination, in the mature disease.

XXVII.—Phthisis; enormous cavity; ulcerated intestines.—This case occurred in a female, aged 17, who was admitted on November 5th, and died December 29th. The entire duration of the illness was nearly eleven months. The first symptoms were gastric; next slight cough. In three months' time hemoptysis, with pains in the right side of the thorax, ensued. Diarrhœa set in in the eighth month. On admission she was greatly emaciated, and presented a cavity in the apex of the right lung, with extensive infiltration of tubercle in the rest of this and the other lung. On the 13th November she had a distinct rigor. The diarrhœa was always associated with umbilical pain and tenderness. After November 27, the hectic rigors became frequent. Decubitus on the right side became nearly impossible; and, a few days prior to death, œdema of the right ancle was observed.

The body was examined sixteen hours after death, and presented extreme emaciation. The skin was exceedingly thin, and of a bluish hue. The left lung was free from adhesions, but was charged with tubercle in small masses, especially at the apex. The right lung was strongly adherent at two points, the septum of the upper and middle lobe, and at the apex. In the latter, an enormous cavity, comprising almost the entire superior lobe, existed; tubercular masses infiltrated the remaining parts. In the abdomen, the kidney and liver were normal; but the small intestines were ulcerated at several points, and the lacteals and mesenteric glands presented tubercular deposits.

The unusual decubitus on the *left* side must, I suppose, be accounted for by the absence of liquid effusion in the side principally affected. The ordinary symptoms were present; and, as not unfrequently happens, the thoracic phenomena were preceded by gastric derangements, which would have tended to obscure the early diagnosis of the case.

XXVIII.—Heart dilated, and Valvular Disease.—In this case the body was examined eleven hours after death. On opening the thorax, the left lung did not collapse, in consequence of numerous old adhesions. Some yellow serous fluid filled up the pleural space. The right lung was similarly circumstanced, but the fluid effused was sanguineous and more copious. Both lungs were intensely congested, and the bronchial tubes filled to the trachea with bloody, frothy serosity. The exposed cardiac surface was much larger than normal. About three ounces of pale straw-coloured effusion escaped on dividing the pericardium. The heart was enormously en-

larged from dilatation, without hypertrophy of the left ventricle. The aortic valves were thickened and roughened by effused lymph. In the abdominal cavity the liver was greatly enlarged, and presented the nutmeg appearance; and the kidneys were exceedingly firm.

The subject of this case was a labourer, named William Drennan, aged 35, who was admitted on November 25th, 1851, after suffering for upwards of six months. He first perceived the approach of anasarca, attended with cough and palpitation. His decubitus, during the last five months, has been supine or on the right side; any other position, as stooping or walking upstairs, producing great anxiety and dyspnœa. On examination, a distinct murmur was heard with the first sound of the heart, especially loud at the apex; and on percussion, extensive dulness as high as the first bone of the sternum, and commensurate with the pericardial limits. There was much dulness, with a slight crepitus at the base of the right lung; and puerile respiratory murmur was heard in the left and the rest of the right lung, which was afterwards replaced by bronchial râles. During the progress of the case, the anasarca subsided for a time under the treatment pursued; but returned a few days before death (21st December), attended with bloody expectoration, extravasation into the conjunctiva, hematuria, and bloody evacuations, and a jaundiced appearance pervaded the surface of the face and breast.

The only evidence of pleuritic effusion in the right side was the decubitus, and the extreme dulness at the base; but it was not such as to obscure the respiratory sounds. Hence, congestion was alone predicated. The heart was manifestly enlarged; but the valve affected was supposed to be the *mitral* (which was, however, free from disease), in consequence of the murmur having been heard most distinctly at the apex. This rule, therefore, must be guardedly followed. The jaundice was the only, but sufficient, indication of the condition of the liver.

XXIX.—Hypertrophy of the Heart; Aortic Valve Disease. —The subject of this case was an Englishman, of dark complexion and moderate proportions, aged 43. He had been several times in the East Indies, and had been subject to palpitation since boyhood; and during the past three years he has been occasionally annoyed with pain in the hepatic region. In other respects he has enjoyed average health, until the occurrence of the present illness, nine months prior to the date of his admission (May 7th). His illness commenced with cough and increased palpitation, and he recently suffered from œdema of the feet and legs. On admission he appeared to be slightly jaundiced. Thoracic examination detected a distinct *double* bruit, heard most clearly over the site of the aortic valves. Bronchial râles prevailed throughout both lungs. The abdomen was full and tense, especially over the region of the liver. There was no tenderness. The appetite good; the tongue moist and clean; and the bowels regular; the pulse characteristically jerking, occasionally irregular. The heart's action was tumultuous, but the

impulse slight, though attended with *fremissement*. The cardiac dulness was limited, but the sounds were prolonged extensively over the chest. He had apparently experienced relief from the treatment employed; but on the 28th May, after a short attack of rigor, profuse perspiration, headach, and excessive dyspnœa and prostration, he suddenly expired.

On examination shortly after death, the lungs were found healthy, save in the presence of bronchial effusion. The pericardium contained about three ounces of clear serous fluid. The left ventricle was concentrically hypertrophied to a great degree, being fully one inch in thickness. The aortic semi-lunar valve was diseased, there being fibrinous deposit in and upon the edges of its segments. It permitted of free regurgitation. The inner coat of the thoracic aorta was affected withthe atheromatous deposit. In the abdomen there were old adhesions of the liver to the diaphragm anteriorly, and to the contiguous viscera. The liver itself was greatly enlarged, its consistence soft, and its appearance like that of incipient cirrhosis. The kidneys were likewise softened, but, except a few cysts under the external coat, were otherwise unchanged.

This case presented a good example of some of the changes produced by a tropical climate.

XXX.—Acute Pericarditis during Convalescence from Fever.—The heart and its covering are the parts presented. The lymph is seen minutely studding the entire surface of the pericardium, and a band about two inches long is adherent to the apex. There was but slight liquid effusion.

The case was that of a female, aged 36, who was admitted on the ninth day of fever. In the course of eleven days she began to convalesce, and was doing very well up to the period of the attack, which occurred twenty-one days afterwards. She was now suddenly seized with rigors, vomiting, and apparent prostration. The vomiting persisted in defiance of all treatment, and in eighteen days she expired. The only lesion found has been mentioned. The case is interesting, as presenting the symptoms of gastritis rather than of the disease which existed, and for the absence of dyspnœa and pain, which circumstance obscured the case, and prevented any thoracic examination from being made.

XXXI.—Hypertrophy of the Heart, with Dilatation.—The subject of this case, Daniel Drain, aged 68, was of very intemperate habits, yet, with the exception of several attacks of pleurisy many years previously, he had enjoyed fair health up to the period of his present illness. He was admitted into the General Hospital, Belfast, on January 28th, 1851, having been then about three months ill. He ascribed his complaints to the effect of "a drinking bout," for, two days after it, he was seized with copious hemoptysis, and ever since has had occasional slighter attacks. Cough, dyspnœa, and palpitation supervened; and have continued in an increasing degree, and latterly œdema of the lower limbs, with scanty urine, has been observed. His appearance on admission was large and bloated, in

great measure caused by the œdema, which had become general. On examination, a distinct bruit, best heard at the apex, accompanied the first sound of the heart; the lowest lobe of the right lung presented crepitating râle, with intensely dull percussion-note, and bronchial râles pervaded the left, and the remainder of the other lung; the urine presented no trace of albumen, but was charged with lithates. He died on the 23rd March following, and during this interval, the dyspnœa, lividity, and pneumonic expectoration, were prominent symptoms, and did not yield in the slightest to the means employed,—cupping, counter-irritation, and mercury.

On a post-mortem inspection, the right lung was found adherent at many points, and embedded in a copious effusion, and its middle and lower lobes in a state of red hepatization, with a small abscess. The left lung presented merely bronchial congestion, and a small pneumonic spot at the extreme base. The heart was greatly hypertrophied, especially the walls of the left ventricle. The mitral, tricuspid, and pulmonary valves were healthy, and only a slight calcareous deposit was observed in one segment of the aortic, which, however, was not rough, and evidently insufficient to interfere with its proper action.

This case is interesting from the occurrence of well-marked murmur, arising from hypertrophy alone. This sign, as heard best at the apex, ordinarily indicates mitral valve disease, but on a minute inspection, nothing of the kind was observable. The evidence of pneumonia and old pleurisy was distinct; and, in combination with the heart-affection, accounted for the anasarca.

XXXII.—Bright's Disease of the Kidney; Phthisis.—Ellen Ferguson, aged 23, was admitted into Hospital, November 25th, 1851, having been ill nine months. Her illness commenced during lactation, with an attack of hemoptysis, accompanied by cough. She weaned the child, but anorexia and debility, and complete amenorrhœa, soon became the chief symptoms, until the beginning of November, when the hemoptysis returned with new symptoms, œdema and great weakness of the lower bowels, and frequent diarrhœa. On admission, thoracic examination disclosed softened tubercle at the apex of the right lung, with pneumonia at the base, and crude tubercles in the left. The urine had a specific gravity of 1012, and was copiously albuminous. This condition, associated with the dropsy, sufficiently indicated the lesion of the kidney.

On a post-mortem examination, the right lung was found to be firmly and extensively adherent, and surrounded by considerable effusion. The adhesions were most prominent at the apex, which contained a cavity filled with pure tubercular matter. Many similar softened points were observed in the rest of the lung, while at the base tubercular masses were seen embedded in pneumonic condensation. The left lung presented only one slight adhesion at the apex; but there were innumerable points of tubercular infiltration, surrounded by hepatized lung. The heart was small, but otherwise normal. The kidneys were large, lobulated, and very friable, and

presented a beautiful marbling on the external surface. The cortical part on section closely resembled the grey matter of brain, and had nearly a similar consistence.

XXXIII.—Bright's Disease of the Kidney; Emphysema.—Anne M'Farlan, aged 40, married, was admitted into the Hospital on January 18th. Since her childhood she had been subject to asthmatic respiration, and she has had two attacks of anasarca within the last eighteen months, induced, it was reported, by cold and wet. On admission, there was general anasarca, extending to the face. The chest had a rounded form, and the percussion-note, anteriorly, was extremely clear. Bronchial râles were present both in inspiration and expiration, the latter prolonged; the cardiac dulness diminished. The urine was scanty and highly coagulable. Cupping was had recourse to, and counter-irritants and alkaline and antimonial diuretics were administered; but she expired on 11th February, with diarrhœa and increasing debility.

The dead body presented extensive anasarca. There was copious sanguineous effusion in both pleural spaces, which were likewise filled with old firm adhesions, almost universal, but especially at the base and lateral parts. The left lung did not collapse, partly from the presence of the adhesions, but chiefly from emphysema, which was observed at every point, except the base, where the adhesions, and some congestive condensation, existed. The right lung was only emphysematous at the apex, but was passively congested in other parts. The walls of the right ventricles were distinctly hypertrophied; the rest of the heart was normal. The kidneys presented the well-marked granular condition. The other organs of the abdominal cavity were healthy. The brain was not examined. It is clear, that the presence of emphysema in this case hurried on an earlier termination than would otherwise be predicated, as the state of the kidney was not so advanced as we usually find it in cases where this condition constitutes the chief disease.

XXXIV.—Disease of the Gall-bladder and Liver; Chronic Inflammation.—The liver is greatly enlarged, and very friable, and has contracted adhesions to the colon, which is diminished in caliber. The gall-bladder is greatly contracted, and its walls, thickened to such an extent as to occupy a considerable space, are converted into a cartilaginous structure, containing cysts, filled with gall-stones of large size. These cysts had no communication with the ductus choledochus. In the immediate neighbourhood of this mass, a small portion of the liver had suppurated. The stomach and intestines, and other abdominal organs, were healthy.

The subject of this case was a woman, aged 50, who had suffered for the last ten or twelve years from dyspepsia, which, during the last two, was greatly aggravated and characterized by repeated paroxysms of pain, referred to the epigastrium and—the constitution having been unaffected—were ascribed to the passage of gall-stones, which, however, were never observed in her stools. During the last four months she was constantly confined to bed, and was reduced

to a state of great debility, from the unceasing irritability of the stomach. Two month ago she became slightly jaundiced, and then the pains became more settled in the region of the liver. Latterly the pain and irritability were so persistent, that scirrhus of the pylorus was diagnosed. During the presence of the paroxysms, the occurrence of large tumours in the curve of the colon was remarkably deceptive, their size and dense hardness indicated retained and hardened fæces so perfectly. They were always, however, dispersed by the administration of enemata of turpentine and asafœtida, which frequently brought away scybalous masses. The tumours, however, were constantly co-existent with the paroxysms. The adhesions of the colon may account for the hardness felt when this gut was inordinately distended.

XXXV.—Intussusception in an Infant.—The child was four months old, and had been previously in good health. Obstinate constipation was the chief symptom; and this was *not* even complete, and was unattended with any inflammatory or febrile symptoms. Vomiting had occurred only two or three times before death. The slight evacuations which were passed presented a sero-sanguinolent appearance.

On examination there were traces of slight peritoneal inflammation over the intestines generally. A portion of the jejunum was observed, on closer inspection, to be invaginated by a coil of the ileum to the extent of fourteen inches; and this entire tract was intensely congested. The passing of fæces in this case rendered the diagnosis very difficult; and besides, the usual evidences of approaching dissolution, which such cases generally exhibit, were not present.

XXXVI.—Acute Peritonitis.—An old woman, aged 60, named Nancy M'Kibbin, was admitted into Hospital, on December 17th, 1850, in a state of the utmost prostration: surface cold, voice feeble, features anxious, and exceedingly quick and feeble pulse. She complained much of abdominal pain, and great tenderness on the least pressure. The bowels had been confined for two days. Her further history could not be ascertained, save that she had been ill but three days. She only survived a few hours, never having rallied.

The peritoneum presented over its entire surface an intensely inflamed appearance. Lymph and serum were effused in abundance, and numerous slight adhesions of the intestines, liver, and stomach, were observed. The interior of the intestines, and the other abdominal and thoracic organs were examined, but were found healthy.

XXXVII.—Purpura (Hæmorrhagica) Fever.—Mary Conway, aged 20, was admitted into Hospital on January 23rd, 1851, having been ill for four days. She was previously healthy, and had been lately suckling; but was attacked on the 20th with pain in the head and back, rigors, and vomiting. On admission she complained of excessive pain of the back, causing perfect agony and restlessness.

Her countenance was somewhat livid, and expression anxious; eyes suffused; skin hot and dry, and covered with rubeoloid eruption, and distinct purpuric spots of large size. The pulse was 132, soft; tongue dry and furred; bowels confined. At night she became delirious, but on the following day she expressed herself as being much better; on the third day, hemorrhage from the rectum, to a considerable extent, set in, which continued at intervals until 5, A. M., of the fourth day, when she expired.

A post-mortem examination disclosed nothing but ecchymosis and extravasations, which pervaded all the organs and tissues in the abdominal and pelvic regions, which were alone inspected.

This case appeared to have been an instance of the sthenic form of purpura. I have seldom witnessed one more acute. The pains and the febrile state were very remarkable; yet treatment based on this view was of no avail.

XXXVIII.—Lumbar Abscess, communicating with the Rectum; Phthisis.—Daniel Wales, aged 23, a wretched, emaciated creature, of a scrofulous appearance, was admitted into Hospital on February 8th, suffering from lumbar abscess of more than twelve months' duration. He has had repeated attacks of diarrhœa and cough; and expectoration, night-sweats, progressive debility, and emaciation, have characterized the case during the last three months. Lately, one of his ankles had become œdematous. On examination, an opening was observed in the lumbar region, above the right ilium, posteriorly, from which about four ounces of pus escaped daily. The examination of the chest gave a prolonged respiratory murmur under the left clavicle, but no increased resonance of voice. The diarrhœa was accompanied by pain and tenderness in the iliac and hypogastric regions. The tongue was characteristically red and clean. Motion in the right leg was limited, in consequence of the lumbar pain.

After a lingering illness, during which tenesmus and progressive debility and emaciation were the chief symptoms, he expired on March 27th.

The body was examined twenty-three hours afterwards. Both lungs were adherent, the left in a greater degree. Tubercle was deposited very extensively, and there was a small cavity at the apex; the right lung presented similar deposit, but no cavity. The heart was small and soft. In the abdomen the intestines were generally much contracted, especially in the descending colon. The mesenteric glands were extensively tuberculized. On pressing on the front of the sacrum, purulent matter flowed into the pelvis. A careful examination detected a sinus, extending under the gluteal muscles, through the great sciatic notch, and opening into the rectum about two inches above the anus. The front of the sacrum was carious to a small extent. The rectum around the aperture, and for some distance above, was diseased. The other organs were normal.

The source of the persistent diarrhœa and tenesmus is here readily seen, though it was not exactly ascertained during life; yet from the fact, that enemata were invariably returned almost immediately, a stricture or obstruction was surmised about the site of the opening. In other respects the case is not uncommon, especially in young subjects, of the scrofulous diathesis.

Case of Malformation in a Fœtus, with Fissure of the Pubic and Hypogastric Regions. By Edward B. Sinclair, M. D., Assistant Physician to the Lying-in Hospital.

Anne Wolley, aged 36, was admitted into the Rotundo Lying-in Hospital on the 2nd of February, 1851, for her sixth confinement. Three of her former children only are alive, two having died of scarlatina; all were born healthy. She has arrived at full term.

In this woman there was observed a considerable protrusion of the uterine tumour, between the recti muscles, to so great an extent that it rested on the thighs when she assumed a sitting posture; and was a source of much inconvenience to her during the latter months of gestation. There had been some preternatural protrusion with her first child, but it very much increased with each subsequent pregnancy. Her labour was natural, and from proper attention having been paid to the uterine tumour during the expulsive efforts, the second stage only occupied three and a half hours; all was concluded much under twenty-four.

After the birth of the child, a large tumour, of an irregular ovoid form, a vivid red colour, and having a villous surface, surrounded by an abrupt termination of the cuticle, was seen to occupy the lower and anterior third of its abdomen. The cord bifurcated near its fœtal attachment, and the vein entered to the upper and left side of the tumour, while the artery (for there was but one) made its exit at the upper and right side, each near the termination of the cuticle; the distance between the two being about two inches. The child cried lustily at birth, and the tumour was distended at each forcible action of the diaphragm, and could be reduced by being pressed backwards into the abdomen. In addition to this tumour a large spina bifida presented itself in the lumbar region, and both feet were clubbed.

The infant lived for five days, took slight nourishment, and the contents of its bowels were found smeared over the surface of the abdominal tumour, but the place of exit was doubtful, for a bougie passed through the anus was suddenly arrested about an inch and a half from that orifice.

On making a careful examination of the tumour after death, it was found to consist of three portions or lobes externally, an anterior central one (the largest), and two lateral, equal in size. Upon

the anterior lobe a small eminence with a central depression was observed, and beneath this eminence a vermiform process. On the inner side of each lateral lobe a small slit-like orifice presented itself. Beneath the entire tumour was a fossa in which it rested, and, behind all, the anus, somewhat overhung by the lower portion of the middle lobe.

On dissection the recti muscles were found to divaricate from their superior attachments, and to course the outer sides of the tumour as they were traced to their inferior insertion on the pubic bones, which in this case did not meet at the symphysis but were widely apart; no muscular structure was observed beyond the edge of the cuticle which bounded the tumour, the other abdominal muscles stopping short at this situation. On raising up a flap consisting of the whole anterior parietes of the abdomen, the first thing remarked was the absence of the colon, there being only a very short small intestine, and stomach; and on detaching the former from the mesentery, dividing it at the duodenum, and passing a bougie along its canal, the instrument made its exit at the depression in the centre of the small eminence before observed on the middle and largest lobe of the abdominal tumour, which was nothing more than a sac lined with peritoneum to which the small intestine was attached, and which was filled by its coils; on lifting up the intestine another structure was seen low down in the pelvis, a complete *cul de sac*, apparently a rudimentary rectum, filled with a gelatinous fluid, about one inch and a half long, and terminating in the anus. On either side was seen, lying in the iliac fossæ, a uterus, or rather a half uterus, that viscus not having been joined in the mesial line; each half had a cavity from which there was no exit, also a Fallopian tube, and an ovary, and each was intimately connected to the lateral lobe of the abdominal tumour, corresponding to its side, which lobes appeared to be a continuation of their structure and possessed a firm consistence.

The kidneys were natural, but a probe passed along the ureters downwards made its appearance at the small slit-like orifices before seen on the inner side of the lateral lobes.

The vein (umbilical) went to the liver in the usual way, but the aorta divided high up, sending off a very small common iliac to the left sides, and no hypogastric; whereas the continuation of the aorta was the hypogastric of the right side.

Case of Double Monster. By R. W. O'Donovan, M. R. C. S. L., Belturbet, County Cavan.

On the morning of Friday, 6th March, 1851, I visited Mrs. L——, aged 35, mother of three children, seven months pregnant of her fourth. She has been in delicate health for four or five weeks; her countenance pale and sickly; loss of appetite; frequent vomitings, and she is much emaciated; there are also suppression of urine and irregularity of alvine secretions, the bowels not having been

moved for five days; her abdomen is enormously enlarged, having the appearance of a twin pregnancy in the ninth month. The lower extremities are œdematous, and she is exceedingly weak and dispirited. Her former pregnancies were favourable. A diuretic mixture was ordered, and a simple enema, to be repeated if necessary.

11 o'clock, P. M.—I was sent for in consequence of labour setting in rapidly. On arriving I found the membranes ruptured, and the room deluged with the waters. The feet and legs of the child were hanging out, cold and livid. At the orifice of the vagina appeared what at first seemed a hand, which at the next pain I endeavoured to return, while I drew down the legs; this I found impracticable; and when the pain subsided, the extremity being forced down, I perceived it to be a third leg. On examining the vagina I discovered a fourth leg, which I hooked down; I then found, by passing the finger round the fœtus, that the body was entire at the umbilicus, the cord lying in the cleft, and a portion of intestine protruding. I assisted the pains, being few and weak, by gradually drawing down the child; the arms were then hooked down, and I ultimately delivered her of a full-grown monster fœtus, with two heads, and two sets of extremities; the placenta, having descended to the vagina, was immediately removed, and cold applied to the uterus to induce contraction; a binder with pads was then put tightly on; forty drops of laudanum, and occasionally a little punch, were administered, strict rest enjoined, and ultimately Mrs. L—— did well.

No description can convey an idea of the horrible appearance of this monster; the heads taken together were much larger than the head of a full-grown healthy child, and were fully developed; the faces fronting each other, the mouth of the posterior being received into the mouth of the anterior, which was a large chasm; the line of junction commencing at the lower lip, and continuing perfect to the umbilicus. The thorax of each was well formed and distinct, except for the juncture; at the dorsal vertebræ and opposite the umbilicus the bodies were drawn towards each other as if compressed by a cord. The abdominal parietes were deficient at the junction of the funis, where there existed only a thin diaphanous membrane, as if an expansion of the cord itself. The arms of the children embraced each other in the form of a figure of 8.

The placenta was about the natural size, part apparently healthy, but about a third presented a vast collection of hydatids.

Owing to the prejudice that exists amongst the lower orders in this country, I regret much that I was unable to obtain permission to make an anatomical examination of this monster, which presented an excellent example of complete duplicity, agreeing with the definition laid down by Vrolik[a]: "two bodies in a state of nearly equal development are placed exactly opposite one another, with their sterna connected together, and with their abdominal cavities either partially or completely coalesced."

[a] Cyclopædia of Anatomy and Physiology, vol. iv., p. 969.

A Case of Labour, with complete Occlusion of the Vagina, treated successfully by Operation. By J. H. Sawyer, M. D., L. R. C. S. I., Master of the Coombe Lying-in Hospital, and Lecturer on Physiology in the Dublin School of Medicine.

Mary Kennedy, aged 29, living in Meath-street, was admitted into the Coombe Lying-in Hospital on Friday, 20th June, 1851, at 7 o'clock, P.M. She appeared strong and healthy-looking, and said she had always enjoyed good health. She had been married fourteen months, and she stated that it was her first pregnancy. Labour had set in six hours before her admission. The resident pupil reported that the pains were neither strong nor regular, and the os uteri was too high to be reached with the finger; he therefore merely prescribed a dose of house medicine.

21st. I saw the case for the first time, and on examination found the vagina closed by an irregular septum of unequal thickness, about two inches above the vulva. I could not detect any aperture of communication, but on inspection through the speculum a small fistulous foramen appeared at the upper and posterior part, which, however, was impervious to the smallest-sized bougie, and no liquor amnii escaped during a pain; its dense, unyielding structure prevented me from satisfactorily ascertaining the presentation. There was a cicatrix extending from the perineum upwards, where it was lost in the recto-vaginal wall, showing that an extensive laceration had occurred in a previous labour, and when strongly pressed she reluctantly admitted that during the last summer but one she had, whilst working in a hay-field, been delivered of a dead child, and for several months had suffered from soreness and great discharge. At 12 o'clock, P.M., my colleague, Dr. Ringland, with the Hospital Consultants, Drs. Jameson, Carmichael, and Dwyer, met me. We learned that during the day the pains had been slight and irregular; the labour had not made any apparent progress; both the fœtal heart and souffle were perceptible; and as her pulse was good, and her strength unimpaired, we determined to wait until the following morning.

22nd. 9, A.M. Dr. Montgomery saw the case with us this morning; our patient had passed a sleepless night; she said she had been harassed with pain, and appeared much exhausted; pulse 120. The head could now be felt obscurely through the septum when strong pressure was made. At Dr. Montgomery's suggestion a full opiate was given, in the hope that after sleep labour would set in with greater energy. At 4, P.M., we had the advantage of Dr. Churchill's co-operation.

The draught had procured her an hour's sleep, from which she expressed herself much refreshed; her pulse had fallen to 90; she had a few weak pains, but the position of the head was unaltered. On examination through the rectum during a pain the head could be readily felt pressed towards the sacrum, indicating ob-

liquity of the os, the anterior lip being drawn downwards and backwards by the contracted cicatrix. Either of two operations had now to be decided on, viz. the Cæsarean section, or cutting through the septum. I must admit the cases mentioned by Mr. Radford, where both mother and child were saved by the Cæsarean operation having been performed before either exhaustion or inflammation had set in, inclined me to try it in the present case, especially as the arrest of the head on the brim of the pelvis prevented me from ascertaining with accuracy what important parts might be endangered in trying to overcome the obstruction. When pressure upwards was made the neck of the bladder and rectum were brought in close proximity, and I had no means of judging either of the position of the cervix or condition of the os. After mature deliberation we decided to wait some time longer, to try whether improved uterine action might not advance the head and produce tension of the septum, and thus enable us more clearly to ascertain a suitable place for operation.

At 9, P.M., we found our patient's condition sadly changed: the pains had ceased altogether; her face had a sunken, anxious expression, and there was a rapid, weak pulse, with tenderness of the abdomen, and great restlessness and prostration of strength.

There was now no other course but at once to operate, and effect delivery as quickly as possible. In this decision I was confirmed by the opinions of Drs. Shekleton, Hardy, and M'Clintock, who had also joined us in consultation,

Having emptied the bladder, and left the catheter in the meatus to mark its course, I introduced two fingers up the rectum, and then passed a sharp-pointed bistoury, sheathed within half an inch of the point, into the vagina until I reached the septum; I directed my knife close to the recto-vaginal wall, cutting cautiously until the escape of the liquor amnii indicated that I had passed through the septum. I then introduced a long dressing-forceps, and by separating the blades I succeeded in enlarging the opening sufficiently to admit my finger. The septum averaged from four to six lines in thickness; it had a firm, fleshy consistence, and was highly vascular. I could now distinguish the disc of the partially dilated os looking directly towards the sacrum; its inferior third, incorporated with the septum, felt rigid and unyielding. I enlarged the aperture I had made laterally by several small incisions, and with considerable difficulty passed two fingers into the uterus. I found the head much elongated and firmly impacted. To have attempted its extraction with the forceps would in all probability have caused laceration of the contracted portion of the vagina and uterus. I therefore perforated, and after great and prolonged exertion succeeded in extracting a male fœtus somewhat above the average size. Severe hemorrhage quickly set in from want of uterine action; but I passed up my hand, and, carefully separating the placenta, waited until Dr. Ringland, by steady friction, cold douche, &c., excited sufficient action to expel both, but upwards of three hours elapsed before we could

procure a permanent contraction of the uterus. Stimulants were freely administered both during and after the operation. After some time she rallied, and was given an anodyne containing 35 minims of tincture of opium.

23rd. She said she had slept five hours, and felt stronger, but complained of constant vomiting and urgent thirst. There was great tenderness of the hypogastric region; pulse 112, very compressible. She was ordered to take one grain of calomel with one-third of a grain of opium every third hour, and turpentine fomentations were applied to the abdomen.

24th. She complains of great soreness around the lower part of the abdomen, and has vomited at intervals a greenish fluid: lochia scanty and very foul; pulse 120, small and sharp; thirst urgent. Three grains of calomel with half a grain of opium were directed to be taken every fourth hour; a turpentine enema was administered, and a blister was applied over the whole surface of the abdomen; the blistered part to be afterwards dressed with mercurial ointment.

25th. Much improved; pulse 96; vomiting has ceased; lochial discharge freer; bowels moved twice after the enema; the gums touched, and mercurial fetor of the breath present. The pills were omitted; she was ordered some light nourishment, and an anodyne draught at bed-time.

26th. During the early part of this day she continued to improve, but in the evening she had several severe rigors, and diarrhœa set in. She was restless and constantly moaning, and complained of deep-seated uneasiness in the lower part of the belly. She was visited in my absence by Dr. Hamilton, who ordered her to take some punch and the opium draught, as she appeared sinking.

27th. Slept well; diarrhœa checked by the astringent mixture; complains of throbbing pain in the right iliac region. On examination a firm, irregular tumour could be felt, filling the entire space, and connected to the uterus. She screamed when pressure was made on it, and the uterus was larger and more prominent than usual; her pulse had risen to 100, and had a sharp ringing feel. I directed a large linseed poultice, spread with mercurial ointment, to be applied, as hot as possible, over the part, and to be changed every third or fourth hour, and one grain of the watery extract of opium in a pill was prescribed to be taken every fourth hour. I saw her again at 11, P. M., and had to give her hot punch to rally her pulse and strength, as she was evidently sinking.

From the 27th of June to the 1st of July marks of decided improvement were daily observed, but on that day she complained of fresh uneasiness in the abdomen, and had two rigors in the course of the day. I found a considerable enlargement to the left of the uterus, in the position of the broad ligament, with great pain and tenderness on pressure: pulse 110, and some tendency to sickness of stomach. She was ordered a blister, to be followed by a poultice covered with mercurial ointment, and as diarrhœa had again set in four ounces of port wine to be given at intervals, alternating with

the chalk mixture; the opium pills and the anodyne still to be continued, and as much light nourishment as she desired. From the 1st to the 19th of July the amendment was steady and progressive. I examined the abdomen prior to her leaving the hospital; some induration still remained, but she thought it was daily getting smaller. She can walk well, and has an excellent appetite; she would not allow the vagina to be examined with the speculum or finger, but said she was all right, an opinion which her husband, some time after she left the hospital, corroborated, having met me in the street.

A simple and effective "Camera Lucida" for Microscopic Purposes. By William Edward Steele, M.B., Fellow of the Royal College of Physicians.

For upwards of the three last years, in making drawings of microscopic objects, I have been in the habit of using a *camera lucida* of simple construction, possessing many advantages over those instruments generally in use. It consists of a disc of *black glass*, of about one-sixth of an inch in diameter, affixed to an arm having a contrivance by which it can be adapted at pleasure to the eye-piece of a microscope. This instrument is, in fact, nothing more in principle than the ordinary steel reflecting *camera*, the little disc of *black glass* being substituted for that of polished steel. The advantages which the glass possesses for this purpose are, its being easily procured with an *accurately level surface*, which is most difficult of attainment in the case of the steel reflector; and also that, unlike the latter, it never rusts nor tarnishes. The image reflected from the surface of the glass is beautifully perfect and distinct, and can be sketched with facility on the paper upon which it is projected, by even an unpractised hand. That which I have been using was constructed according to my directions by Mr. George Yeates, of Grafton-street, at less than half the cost of the ordinary instruments of this kind.

On the Physiology of Emphysema of the Lungs. By Dr. Frey[a].

An interesting paper on this subject, of which we can only state the results, is published by Dr. Frey in Vierordt's Archives.

A. The air-cells are dilated or ruptured during *inspiration*, in consequence of the respiratory movements being too great, either absolutely or relatively, to the number of air-cells which are capable of expansion. (*a*) The extremes are, in the normal condition, determined by the capacity which the thorax ordinarily attains on

[a] [The following selections from Foreign Journals have been translated from the originals by Dr. W. D. Moore.—Ed.]

inspiration; hence, we find that, in the more muscular subjects, the lungs are larger (with weak vesicular murmur), and that in weaker individuals they are smaller. (*b*) The thorax is abnormally dilated on inspiration, and imperfectly emptied on expiration: *a.* in consequence of obstructions in the trachea and larynx, œdema glottidis, diminution of the caliber of the windpipe by mucus, blood, false membrane, foreign bodies, or lastly, by compression of the trachea by goitre; *β.* in consequence of the diminished resistance of the cells of a part or of the entire of the lung. (*c*) The thorax is excessively dilated in proportion to the number of accessible air-cells in pneumonia, phthisis, effusion into the cavity of the pleura, bronchial catarrh, spasm of the bronchial tubes, &c.

B. *Dilatation or Rupture of the Cells in Expiration.*—When individual bronchi are injured in their caliber, so as more or less to impede the evacuation of the cells to which they lead, these cells are subjected, on expiration, to an unequal compression, because (*a*) the walls of the thorax or diaphragm, though they may not be in immediate contact with them, compress the portions of the lung which are less easily emptied, with greater force than those which offer less resistance; and (*b*) because portions of the lung which are expanded in different degrees, in consequence of this unequal compression, themselves compress intervening portions unequally. Hence, entire cells, or portions of the walls of cells, are subjected to an excessive dilatation or rupture. The author considers that inspiration is the principal cause of emphysema of the lungs; that the greater force of the act of inspiration determines, in the majority of cases, the dilatation of the cells; that the pressure of the act of expiration is only to be taken into account when the exit of the air is impeded in different degrees, in distinct portions of the lung, by the state of the bronchi, by which these portions are unequally compressed; and further, that inspiration, by sending too much air into the easily accessible cells, and too little into those which are difficult of access, must always be the more important cause. The lungs increase in bulk, in consequence of the enlargement of the cells; this increase takes place chiefly from above downwards, because, in this direction, the yielding diaphragm opposes the least resistance, but by this the motion of the diaphragm itself becomes limited; for, its convexity upwards being removed, it can now in inspiration descend but little, or not at all; and hence, the other muscles of inspiration are obliged to compensate, by increased action, for the loss of its assistance in the act of enlarging the cavity of the thorax. The nutrition of the diaphragm is lessened on account of the diminution of its action; while that of the other inspiratory muscles increases, according to well-known laws, in proportion to the additional labour performed by them. Atrophy of the diaphragm is, therefore, the consequence and not, as Rokitansky thinks, the cause of emphysema.—*Vierteljahrschrift für die praktische Heilkunde.* 1851. 3 *Band. Analekten, S.* 34.

On Bronchiektasis. By Dr. Rapp.

Dr. Rapp read a paper on bronchiektasis before the Physico-Medical Society of Würzburg, and quoted twenty-four cases in support of his views. The more frequent occurrence of the cylindrical variety in the lower lobes of the lung may depend upon the fact, that it is here inflammatory actions most frequently take place; and that the bronchi, in this situation, run a straighter and longer course; while, in the upper lobes, the tubes are shorter and ramify at more acute angles, and that in the upper lobes, the necklace or bladder-wrack form of the disease is chiefly found in consequence of the existence of tubercle. In practice, two varieties are to be distinguished: one in which the longitudinal elastic fibres, as well as the circular fibres, hypertrophied and visible to the naked eye, are frequently dilated into diverticula; and a second, in which all the elements of the bronchial tissue are in an atrophied condition. In both, however, the ciliated epithelium has disappeared, and is replaced by a pavement epithelium, with an abundant, thick, purulent secretion, the fetid smell of which, when long retained, proceeds from its decomposition into various fatty acids. Of the causes of bronchiektasis,—atrophy of the parenchyma surrounding the bronchi, mechanical impaction of mucus, and alteration of the mucous secretion by catarrh,—Rapp disputes the last so far, that he maintains that catarrh is most frequently a secondarily induced affection. The pathologico-anatomical appearances are well known. The author rests the diagnosis on the dyspnœa; on a sensation of oppression and soreness chiefly felt in the seat of the affection, and diminishing after expectoration; on the fetor, the cough and expectoration; and on the results of the physical examination, laying principal stress on the increase of clearness on percussion after expectoration, and on the vesicular respiration being attended with coarse ronchus. In the treatment, the two indications are: first, to assist the expectoration; and secondly, to diminish the excessive secretion of mucus. The author is fortunate enough to possess a number of so-called expectorants, which he employs with the first intention; and he fulfils the second indication by the use of the gums, and especially the fetid gum-resins. He particularly extols inhalations of tar, and reprehends the use of narcotic remedies. —*Vierteljahrschrift für die praktische Heilkunde.* 1851. 3 *Band. Analekten, S.* 33.

Case of Perichondritis Laryngea and Ulcer of the Œsophagus. By Professor Malmsten, of Stockholm.

The author communicated the following interesting case to the Swedish Association of Physicians at a late meeting of that body:—Carin Olin, an unmarried woman, thirty-six years of age, was admitted into the medical department of the hospital on the 19th November, 1849. The patient, who was a native of Scania, lived, according to her own statement, since 1833 principally in Stockholm; she had

suffered from an ague of long standing, which had, however, ceased a year and a half ago; in other respects her health had been good. About three months before her admission, she was attacked with tonsillitis, accompanied by great difficulty in swallowing; the disease continued, and the dysphagia gradually increased so that for three weeks she had been almost incapable of eating anything; and for the last fourteen days she had been quite unable to swallow either liquid or solid. On her admission, it was with great difficulty and with great pain to the patient that an extremely small bougie could be introduced. The following was the report on the 21st November:—The patient is extremely emaciated, and of cachectic appearance. Her breath is fetid, respiration exceedingly difficult, and she can swallow neither food nor drink; when she attempts to drink water, it is immediately rejected, and part of it comes out through the nose. On inspection of the throat an open abscess, sinking deep into the soft parts, is visible in the isthmus faucium on the left side; the patient is in so very weak a state, that examination with a probe cannot be attempted. Her voice is hoarse; and there is much mucous râle in both lungs, accompanied by diminished resonance on percussion. On the right leg many deep cicatrices are perceptible, left by sores, which the patient says have been healed for more than a year; they resemble the scars of rupia. According to her own report, she has never had syphilis; but her statements are in general so deficient in clearness, that little confidence can be placed in any conclusions deduced from them. A lavement of broth, with tincture of opium, was prescribed. The patient died at half-past 10, P.M. Autopsy thirty-six hours after death:—"The mucous membrane of the larynx was œdematous; its ligaments were likewise greatly swollen. The thyroid cartilage, for the greater part, lay loose, separated from its fibrous covering, and was in all directions superficially softened, and presented a greyish discolouration (necrosis); around it a space, filled with pus, had formed, from which openings were found to exist on both sides of the pharynx, and into these the denuded cornua of the thyroid cartilage projected. The trachea was sound; in the left pleura there was a newly-formed solid exudation, and about half a pint of fluid. The lung was gorged with blood, but the pulmonary tissue was healthy. Traces of softened tubercle in process of cicatrization were found in different parts of the right lung. The thyroid gland was divided into two lobes, the left of which was considerably swollen. In the isthmus faucium on the left side, was a deep ulcer, perforating the mucous membrane; a little lower, on the same side, was a second ulcer, extending to the commencement of the œsophagus, and running into the above-described opening, in front of the cornu of the thyroid cartilage. In the passage to the œsophagus, the pharynx was drawn downwards, and formed a sack, into which a broad fold of the mucous membrane of the former projected; this fold, free at its anterior border, formed a valve which completely covered the opening of the tube. From this valve, the surface of which was uneven, being fur-

nished with button-shaped elevations and irregular folds, proceeded a small projection about three lines in length, broad at the base and bluntly pointed. In other parts the passage to the stomach was normal; the stomach and intestinal canal were sound, as were the kidneys, pancreas, and spleen. Nothing else worthy of note was observed." The pathological preparation was exhibited. The patient confidently insisted that she never had syphilis; and Herr Wistrand had not been able to find her name in the books of the venereal hospital (Kurhuset); but the state of the ulceration, and partly the deep white cicatrices on the left knee, led Dr. Malmsten to consider it most probable that the affection was of a syphilitic nature.—*Hygiea, January*, 1851, p. 56.

On Spinal Irritation. By Dr. Heidenhain, of Marienwerder.

The anatomical and physiological investigations of modern times; the discovery of the isolated course of the primary nervous filaments from the centre to the periphery; the division of the filaments into those of motion, sensation, and special sense; the establishment of the law of eccentric sensation; the doctrine of reflex action: have infinitely advanced our knowledge of the pathology of the nervous system. The ordinary definition of spinal irritation, which may be thus expressed, "An irritation of the spinal marrow, manifesting itself in morbid phenomena in other organs at the periphery," is erroneous, as it is evident that the spinal marrow has no functions which are confined to itself, but that, with all its filaments, it only forms an integral part of the organs at the periphery; this definition is, therefore, unsatisfactory and incomplete. The principle of the theory of spinal irritation is simply this: a variety of forms of disease, which, from their symptoms, appear to have their seat in organs at the periphery, depend, nevertheless, not on any corresponding physical change in these organs, but on an affection of the central terminations of their nerves. From this view it follows that the term, spinal irritation, is by no means adequate, since the central termination of many nervous filaments is in the brain, also the seat of central affections. Moreover, the manner in which the central nervous extremities are affected, does not always correspond to irritation in the ordinary sense, but to something very different. This being clearly understood, the term, although otherwise objectionable, may be allowed to stand. In irregularities of muscular action, the causal lesion of the nervous centres has long since been recognised; of those of sensation, on the contrary, anæsthesia alone has been referred to such a source; the seat of hyperæsthesia and dysæsthesia is usually incorrectly supposed to lie in the peripheric courses of the nerves in which the symptoms appear. This obtains of neuralgic affections, and still more of lesions of motion and sensibility of the viscera: here the mysterious influence of the sympathetic nerve is to be taken into account. The law of eccentric sensation explains, much more correctly, such symptoms as the vomiting in cerebral affections, the aura epileptica, and other abnormal symptoms.

Pathological anatomy has hitherto paid too little attention to the nervous centres, and too much to the more visible and more tangible pseudo-plastic products in the viscera and tissues; thus giving a partial direction to pathology, and often regarding the consequence as the cause, the product as the total, of the morbid process. It may in general be asserted, that in neuroses, where the existence of a peripheric irritation is not easily discoverable (as, for example, carious teeth in many neuralgic affections of the trigeminus), or where the nervous sheaths are not implicated, the seat of the affection is to be looked for in the central organs. In affections of the motor nerves, we should examine whether an irritation of peripheric nerves does not exist at a distance from the apparent seat of the lesion, causing the anomalous motion by a reflex action, through the intervention of the central organ. The pain in the back, produced by pressure on the spinous processes or at their sides, the author explains by supposing that pressure on the nerves which are distributed on the surface of the vertebral column, can only produce a sensation corresponding to the condition of the central organ; and that if the latter should be, in consequence of any pathological change, abnormal, a corresponding anomalous sensation, such as pain, must be produced. Consequently, pain in the back is a certain sign of an irregular excitement in the spinal marrow, but it does not always indicate what has been denominated spinal irritation. To incorrect views of this relation are partly to be attributed the over-estimation of dorsal pain, as a pathognomonic sign, and the errors which have confused and brought into discredit the theory of spinal irritation. There is scarcely any important morbid process in which the spinal marrow is not affected in one part or other, causing pain on external pressure. Pain in the back, and spinal irritation, are not identical; the former, indeed, corroborates the diagnosis, but may also mislead, especially when the spinal irritation (in the wider sense of the term) is located in the medulla oblongata, or the higher portion of the column. The more exact nature of spinal irritation is not always the same, nor is it defined; the name only signifies, in a general way, a state of suffering. Very different conditions in the central organs are frequently attended with similar combinations of symptoms at the periphery. The most common depend on cases of spinal irritation involving no danger to life, when a purely dynamic alteration is not the cause; on irregular determinations of blood; hyperæmia; congestions in particular parts of the central organ, which often continue for a long time without passing into effusion; furthermore, on dyscrasia and anæmia. The *treatment* should, in the first instance, be directed to that portion of the centre in which, according to the diagnosis, the affection is located. Without this, success is scarcely to be expected. The local means comprise leeching, cupping, and mercurial inunctions, followed by the use of stimulating liniments, derivatives, cold effusion, and electricity. In conjunction with the local treatment, baths (containing iron, potash, &c.), and cold sea-bathing; or, in their stead, the wet sheet should be employed. In-

ternally, the author particularly recommends quina, carbonate of iron, preparations of iron in general, and ferruginous mineral waters.— *Vierteljahrschrift für die praktische Heilkunde.* 1851. 3 *Band. Analekten, S.* 84.

On Galvano-Puncture in the Cure of Varicose Veins, and of Aneurisms. By Professor Schuh.

The experiments performed by the author have given the following results, which, on account of their interest, we shall detail at length. 1. The coagulation of the blood is not always the immediate consequence of electro-puncture employed during from ten to twenty minutes; on the contrary, it is frequently not observable until after the lapse of many hours, or until the second day, and it increases in degree during one or two days; it is, therefore, manifestly due to inflammation excited by the operation. Where the coagulation takes place during the operation, it is certainly to be attributed to the chemical and also partly to the mechanical influence created by the presence of the foreign body. The more the mass of blood is kept at rest, the greater is the probability that coagulation will set in during the operation; it is, therefore, advisable to apply a bandage above and below the seat of operation. The hardness shows itself most frequently earlier at the positive than at the negative pole; if the needles are, for example, three or four inches apart, the entire intervening space does not become hardened at the same time, but the central point between the two insertions remains more or less soft. 2. Sensibility to the galvano-puncture varies in different individuals; on closing the contact all experience pain, which, however, in one patient quickly ceases, or passes into a gentle prickling sensation; while in another it continues very violent, and even occasions spasms of the limbs. The pain occasionally abates, to return again in the same degree. It was most frequently more acute at the positive pole. 3. During the galvanic action, a grayish-white, lenticular, semi-transparent vesicle very soon forms around the needle of the zinc pole; a slightly bluish one subsequently appears at the negative pole; both are surrounded by a narrow red halo, in which the elimination of gas can be seen, and even crepitation can be perceived. 4. On the following day, a brown stain is observed on the burnt cuticle in the situation of the vesicle, or more frequently a little scab, which falls off without suppuration in the course of two or three weeks, leaving a slight depression. On one occasion only did the formation of an eschar penetrate deeper. 5. The subsequent inflammation is indicated by the occurrence of pain. On the second day the hardness, heat, and sensibility have increased; the latter, however, is seldom very excessive. These phenomena continue for a few days only; the coagulum of blood in contact with the inner coat diminishes, and draws the walls towards the centre, causing a diminution of the caliber of the vein. 6. A single application will scarcely ever effect a cure; the electro-punc-

ture must be frequently repeated. 7. Its employment is not free from danger: phlebitis, with secondary pyæmia, is no uncommon consequence of the operation. Moreover, it is evident that prudence in the choice of cases is indispensable, and that its performance is not admissible except when the trunks of the superficial veins of the lower extremity are alone dilated. In aneurisms in which the application of ligature to the vessel itself is no longer possible, or would be attended with too great danger, electro-puncture appears to offer a chance of success, only when preceded by the application of bandages to the periphery of the limb.—*Vierteljahrschrift für die praktische Heilkunde. Prag.* 1851. *Band* 1. *Analekten, S.* 35.

A New Method of preparing Powders for Use in Medicine.

Wittke of Erfurt recommends a new and very useful form of powder. Tinctures, as is well known, generally possess the most active properties of the drugs from which they are prepared, but the amount of spirit they contain often renders their employment inadvisable; Wittke, therefore, mixes tincture of hellebore, of cinchona, &c., with an equal quantity of sugar, evaporates to dryness, and powders the residuum. In this manner, he succeeds in concentrating, in a very small bulk, the active portion of a very large quantity of the drug, and he prescribes the powder as saccharized cinchona, &c. These preparations bear some analogy to conserves, over which, however, they have a great advantage, in being free from mucilage, vegetable albumen, and other inert matters.—*Vierteljahrschrift für die praktische Heilkunde*, 1851. *Band.* 3 *Analekten, S.* 14.

Report of a Case in which a large Uterine Calculus was removed. By Professor Paolo D'Andrea of Trani.

Signora Filippa Spalluci of Trani, aged eighty-six years, of sanguineous temperament and middle height, had always enjoyed rude health, nor had she ever suffered from calculous concretions. In her youth her frame was firm and muscular. She married when twenty-four years of age; and at thirty gave birth to a son. She became a widow at 60.

For four years she had been constantly afflicted with a sensation of great weight in the region of the uterus, pain in the back, extending to the thighs, and impeding their movements; leucorrhœal discharge; severe pruritus, and a burning sensation in the vulva; pain and uneasiness in the bladder, and dysuria, subsequently followed by incontinence of urine; which last symptom, from the alkaline odour it occasioned, rendered her condition insupportable both to herself and those about her.

On the 7th of last January, the patient's sufferings were still further increased by the occurrence of partial prolapse of the uterus, and Professor D'Andrea was called in to see her. On examination with the finger, and afterwards with the sound, he satisfied himself

that her case was one of uterine calculus, and without loss of time he proceeded to remove it. He made an incision, of about an inch in length, into the cervix uteri, at the left side, which was sufficient to permit the introduction of a forceps. Having seized the stone with the instrument, guided by the fingers in order to avoid including the soft parts, the operator found great resistance to his attempts to withdraw it; he, therefore, introduced the index finger of the right hand, to ascertain the cause of the obstruction, and discovered that the portion of the calculus, opposite to the fundus of the uterus, was covered with a membrane. This it was, therefore, necessary to cut in a longitudinal direction from above downwards, guiding the point of the bistoury with the left hand while operating with the right. He again seized the calculus with the forceps, and, with an oscillating motion, and the aid of pressure, he succeeded in extracting it. After the operation, fomentations of chamomile were applied. On visiting the patient next day, he found everything going on well; the portions of the membrane which enveloped the stone that remained adherent to the uterus, were successively detached by a slow process of suppuration, and without any unfavourable consequences. In a few days the patient was convalescent.

The calculus was two and a half inches in length, and the circumference towards the larger extremity four inches; it weighed about four and a half ounces. Its shape was pyriform, the larger end being covered with a smooth layer, which extended to the middle of the concretion; while the remaining portion presented a granular appearance, and its tapering form clearly indicated where the false membrane had been attached. The calculus, from its appearance, and dirty white colour, seemed to be composed of urates and earthy phosphates; but an unwillingness to destroy it, as a pathological specimen, prevented its being subjected to chemical analysis. The foregoing case is remarkable for the great weight of the uterine calculus, and for the success which attended an operation performed on a woman of eighty-six years of age. It may be well to add, that, on the 20th of the following March, Professor D'Andrea was again called to visit the same patient; she then complained of severe pains in the labia, extending to the anus; and suffered from a copious bloody and ichorous discharge. On examination, extensive ulcerations, incrusted with earthy phosphates, were found in the affected parts.—*Il Raccoglitore Medico di Fano*, 1851, p. 472.

[Cases of this nature, though rare, are occasionally met with. We have seen, in Dr. Montgomery's possession, a uterine calculus about the size of the one described by Professor D'Andrea, but we do not know the chemical composition of it. They are, doubtless, originally fibrous tumours, which, in process of time, have undergone calcareous transformation; and, when divided, they present an irregular, as it were, cellular structure, instead of being solid, as we might expect. That such was the origin of the present calculus, is confirmed by the coating of the so-called membrane, which probably was a portion of the uterine and mucous tissue that had formerly covered the fibrous tumour].

Report on Infanticide by Immersion of the Child in Pulverulent Matters. Laid before the Society of Medicine of Bordeaux, by Dr. ADRIEN BERENGUIER, Physician to the Hôpital de Rabastens (Tarn).

THERE are few subjects in legal medicine attended with so many difficulties as that of infanticide. Each new crime presents unwonted phases, or brings before us stratagems hitherto unresorted to. The circumstances of the case are infinitely varied, and suggests to him whose duty it is to interpret them, the most delicate and arduous inquiries. The following is an example of infanticide, accomplished by means, no mention of which is to be found in our standard works of medical jurisprudence; and for this reason the case appears to me to merit publication.

On the 19th of December, 1850, Martiane Combres was condemned, by the Court of Assize, at Tarn, to five years of hard labour, for a crime thus detailed in the indictment: "Towards the end of last summer this woman, twenty-nine years of age, and four years a widow, found that she was pregnant; she concealed her pregnancy from every one, even from her mother and her family, and, on the 9th of October, alone in her chamber, gave birth to a male child. To get rid of it she strangled, or attempted to strangle it, and hastened to conceal the body in a large grease-pot filled with ashes."

Was the child living when it was deposited in the ashes? This question was of paramount importance for the investigation of the case, and it was not without difficulty and hesitation that I decided to answer it in the affirmative.

Having been summoned at the time of the discovery of the crime, I gave in the following report:—

On the 10th of October, 1850, at 10 o'clock, P. M., I, the undersigned, physician of the faculty of Paris, surgeon of the Hôpital de Rabastens (Tarn), residing at Rabastens aforesaid, on the requisition of the magistrate of our canton, and after having sworn before him to make my report, and to give my opinion honourably and conscientiously, repaired to the commune of Coufouleux, in order to visit the woman Martiane Combres, *alias* the widow Cols, supposed to have recently lain in, and to ascertain her state, as well as that of a fœtus which, it was stated, would be found in her house.

1. *Visit to the Mother.*—Having arrived at the house, I found the widow Cols, fully dressed, and lying on a bed in a room on the ground-floor. My entrance roused her from a state of real or assumed slumber, when I noticed as follows:

I. Her face was pale, covered with the confluent spots of redness peculiar to women in a state of pregnancy, and which do not disappear until some days or weeks after delivery.

II. Her pulse was small, firm, and very quick; her look expressed at once surprise and dejection.

III. Her breasts were a little swollen, and moderately distended: on pressing them gently towards the nipple I obtained some drops of sero-milky fluid, of a yellowish colour, and disagreeable odour.

IV. Her abdomen was flaccid and wrinkled, and presented whitish streaks, very evident about the groins. A broad brownish streak also, more decided inferiorly, was observed in the direction of the median line, extending from the pubis to the umbilicus.

V. On applying the hand upon the hypogastric region, an ovoid tumour was found, extending a little above the os pubis.

VI. The external genitals were moderately swollen; the vulva was slightly dehiscent; a reddish sanguineous matter, devoid of fetor, flowed from it. The fourchette was soft and yielding, and was not lacerated. The os uteri was widely dilated, readily admitting two fingers; the lips of the os were flaccid, soft, and swollen.

VII. It should be observed that this woman had borne children before, that the pelvis was wide, well-shaped, and calculated to admit of easy labour.

Conclusion.—From these various observations I infer:—

1st. That the Widow Cols was delivered within twenty-four hours, at the farthest, as is proved by the external condition of the breasts and abdomen, by the nature of the sanguineous discharge, and by the result of the examination of the external and internal genitals.

2ndly. That nothing but accouchement could produce the combination of circumstances observed.

3rdly. That delivery must have been rapid and easy.

Examination of the Fœtus.—After having examined the woman Cols, there was laid before me the body of a male child, which the magistrate and I found, according to information given us by the accused herself, covered with ashes in a grease-pot, in a small adjoining room. The placenta was subsequently discovered elsewhere.

The fœtus was immediately removed to the mayoralty-house of Rabastens, in the jurisdiction of the magistrate who had accompanied me.

Having washed the body repeatedly, to remove the adhering ashes, care being taken to avoid immersing the mouth in water, we observed:—

I. That the body was large, fat, and well made, exhibiting no sign of decomposition; and that both the upper and lower extremities were in due proportion.

II. It weighed 6 lbs. 8 ozs. 15 dwts. 7 grs. (Troy); the entire length was very nearly nineteen inches; and it measured ten and a quarter inches from the vertex to the umbilicus; and nine and a half inches from the umbilicus to the sole of the foot.

III. The upper extremities were flexible and pale; the lower were rigid, and presented a purplish marbling on the inner surface of the thighs.

IV. The thorax was decidedly vaulted, and, on percussion, was highly sonorous.

V. The sexual organs were well developed; both testicles had descended.

VI. The skin was everywhere firm, white, and fully organised;

the nails on both hands and feet were completely formed. On the head were tufts of black hair, upwards of half an inch long.

VII. A portion of the funis, about three-quarters of an inch in length, was attached to the umbilicus; its clean and even section proved that it had been divided with a sharp instrument, such as a pair of scissors. There was no trace of ligature.

VIII. The face and the entire scalp, particularly on the left side, were purplish. Neither tumour nor external injury was visible in this part.

IX. The scalp having been removed, the bones of the cranium felt hard on pressure; they were purplish, especially on the left side: this colour, which was very decided externally, did not pervade the entire substance of the bone, and was not visible on its internal surface; it seemed to be confined to the pericranium; there was no appearance of fracture, either on the upper portion or at the base of the skull; the anterior fontanelle was not one of the largest; the posterior was exceedingly small.

X. The substance of the brain was healthy, but a little paler than it generally is in recently born subjects.

XI. All the anterior portion of the neck, from the fold of the chin to the sternum, was very red and frayed as if it had been scraped with a sharp instrument; the skin here presented a red vermillion colour, as if the epidermis had been scratched off with the nails; when it was cut into, however, there was no trace of deeper injury; the subcutaneous layer of fat, the muscles, and the thyroid gland, on careful dissection, presented no trace of ecchymosis; not the smallest portion of extravasated blood was to be found; the larynx and trachea were unruptured; the mucous membrane, of a pale reddish tint, was quite normal both in texture and colour.

XII. The mouth, the palate, the tongue, the nasal fossæ, the isthmus of the fauces, the pharynx, and as far as the entrance to the glottis, were coated with ashes; some were also found in the commencement of the œsophagus.

XIII. On proceeding to open the chest it was observed that the muscles were red, of a beautiful flesh colour; a minute drop of black blood flowed from each little venous branch divided by the knife.

XIV. In the thorax all the organs were well formed. The lungs concealed the entire pericardium; they were of a pale red colour, and soft to the touch; they were removed from the chest with the heart and thymus gland; and the trachea and great vessels having been previously tied, they were placed in a large vessel of river water, at a temperature of 70° F., in which they floated; plunged to the bottom of the vessel, the three organs quickly rose again to the surface. A similar result was obtained on repeating the experiment with spring water, at 59° F. On cutting them into small portions the lungs crepitated under the knife; each portion, after being squeezed between the fingers under water, quickly regained the surface.

XV. The lungs, when separated from the heart and thymus gland, weighed rather more than one and a half ounces (Troy), being in proportion to the weight of the entire body as 1 to 35.

XVI. The heart and great vessels contained black blood, but not in any considerable quantity; on the inter-auricular septum was observed a kind of transverse slit, capable of admitting a probe, which proved to be the as yet unclosed foramen ovale.

XVII. It was with difficulty that a very fine probe could be passed into the orifices of the umbilical arteries and veins.

XVIII. Neither morbid alteration nor malformation was to be found in any of the abdominal viscera. The liver was perfectly healthy, of a reddish brown colour, and weighed nearly four ounces (Troy); the bladder was empty; the large intestines were loaded with dark green and very viscid meconium.

Conclusions.—From the preceding facts I inferred:—

1st. That the child was born at its full time, viable and well formed, as was proved by the solidity of the bones, and by the due proportion existing in the volume of the several organs.

2ndly. That the labour must have been natural, as was demonstrated by the purplish colour of the scalp and pericranium, as well as by the absence of any sign of the feet, knees, or breech, having presented.

3rdly. That the child was born alive; and that respiration had been fully established for some moments, and perhaps for some hours, which was proved by the specific lightness of the lungs.

4thly. That it died shortly after its birth, as was indicated by the meconium being still contained in the large intestines, and by the state of the umbilical vessels.

5thly. That its death must have occurred within the last twenty-four hours, since no trace of decomposition was to be observed.

6thly. That, although marks of strangulation were visible on the anterior part of the neck, and although ashes were found as far as the orifice of the glottis, death was not produced by suffocation or asphyxia, since the respiratory organs did not present any kind of alteration.

7thly. That the death of the child cannot be attributed to hemorrhage from the funis, as the body and viscera did not present an anæmic condition. At the same time, the comparatively colourless state of the cerebral pulp, and the inconsiderable amount of blood found in the cavities of the heart and in the great vessels, would show that the loss of blood which occurred for want of a ligature on the cord, must have been very great, and must have weakened the infant considerably.

Consequently, I am inclined to think that there may have been an attempt at strangulation; that hemorrhage from the cord may have compromised the life of the child; but that it still breathed when it was deposited in the vessel containing the ashes; and that its death was the result of the three causes combined.

Such was the inference from the facts before me; the compli-

cated, and more or less vague nature of which did not allow me to determine exactly what had been the cause of the death of the child.

On a legal examination it is not enough to be able to state that the child entered the world viable and living, the investigator is further bound to show in what manner death had taken place. In this particular case, the infant had not lost blood from the cord in sufficient quantity to induce complete anæmia; an attentive examination of the body did not warrant this supposition; moreover, it is stated by obstetricians, that the omission of a ligature on the funis is not always followed by fatal hemorrhage. Excoriations observed on the anterior part of the neck, and evidently produced during life, pointed to the fact of strangulation having been attempted, but the state of the subjacent organs, the absence of frothy matter in the trachea, and the colour of the lungs, did not justify the inference that death was thus produced.

The child was discovered in a vessel filled with ashes; it is there, then, that it must have perished, suffocated by the pulverulent particles. The adoption of this view is justified by the fact of the ashes having descended *very low* into the œsophagus, and by their having been arrested, in a defined manner, at the circumference of the orifice of the glottis, which shows that their introduction took place during life, and that the epiglottis, by being closely pressed down on the glottis, prevented their entrance into the air-passages. Had they got into the latter, it could only have been after death, in consequence of the general relaxation of the organs, and of concussions which might have been given to the vessel containing the body.

The child had, consequently, been placed alive in a grease-pot, where it was subsequently covered with pulverulent matters. That this was what took place was proved by the investigations, and all doubt on the subject has been removed by the confession of the mother since her condemnation.

Three other questions, as yet unexplained by science, have suggested themselves to the investigator, and to solve them is the object of this memoir.

1st. In a medium formed by pulverulent matters, is death instantaneous, or may life be prolonged for some time?

2nd. Under such circumstances do powders, such as ashes, flour, ground plaster, &c., enter the air-passages; and to what depth do they penetrate into the organs of respiration?

3rd. What are the anatomical characters which the lungs of an infant thus suffocated in pulverulent matters may present?

These questions can be solved only by experiment. In few branches of science can greater advantages be derived from experiments on living animals than in legal medicine. All the important investigations of our medical jurists bear testimony to the truth of this statement, and all their works are based upon experiment. The subject of infanticide, in particular, suggests a multitude of questions which can be only thus decided.

This crime has been studied under all its known phases: a page of M. Devergie's Legal Medicine is devoted to an enumeration of the various means hitherto employed by unnatural mothers for the purpose of destroying their offspring. To none had the mode we have been considering, suffocation in ashes, occurred. This is a new feature in the annals of French forensic medicine, and, consequently, the questions which it may suggest to jurors and lawyers remain to be considered, and demand the attention of the medical jurist, who should be prepared to give clear and well-arranged testimony. A short note inserted in the thirtieth volume of the "Annales d' Hygiène Publique et de Médecine Légale," states that Dr. Matthysen, of Antwerp, had investigated on rabbits and kittens the manner in which these animals perished when buried in ashes; but this note is so brief and incomplete that it leaves the questions I have suggested unanswered, and it has not afforded me any assistance.

In order to solve the three questions I had proposed to myself, I began by burying in ashes four shepherd's dogs, three hours after their birth. They lived fifteen hours in this medium, and, on examining their bodies after death, the lungs appeared, perhaps, a little more vascular than in the normal state. The ashes had reached as far as the middle of the œsophagus; the nasal fossæ and the pharynx were crammed with them. Not an atom had passed into the windpipe; the ashes had stopped abruptly, and in a distinct line around the opening of the glottis.

Before proceeding to further experiments, I took some vigorous young dogs, immediately after birth, and suffered them to die in the open air, while others were drowned in a pool of water. In the former, the lungs were found to be almost white, with a very slightly reddish tint; while in the latter they were of a very decided brownish red; in the dogs which had been suffocated in ashes the colour was intermediate. The parenchyma of the lungs, without being of a brownish red, as it was in the dogs which had been drowned, was sufficiently red to show that respiration must have been during life both painful and difficult; the larger bronchial tubes, however, were free from frothy matter.

Comparative experiments were subsequently made with other substances reduced to powder, such as plaster and wheat-flour.

Ashes always penetrated farther into the œsophagus than the other pulverulent matters. The plaster and flour form a paste with the mucous secretions of the mouth and pharynx, which adheres to the walls of these cavities, and thus resists the efforts at deglutition which tend to force it towards the stomach.

In wheat-flour the animals lived some hours less than in the other powders; it appeared to become agglutinated on the epiglottis and to interfere with its movements; notwithstanding, the parenchyma of the lungs was not more deeply coloured in the little dogs which were suffocated in flour than in those which perished in ashes or plaster.

In conclusion, my experiments have shown:

1st. That death does not occur instantaneously in animals which are buried in pulverulent matters; the air which is contained between the molecules of the powders is sufficient to prevent them from dying of asphyxia.

2ndly. That in animals which have been buried alive in pulverulent matters, the latter are prevented from entering the larynx by the convulsive apposition of the epiglottis to the glottis; they fill the nasal fossæ and the pharynx, and rarely penetrate far into the œsophagus. I never found them in the stomach.

3rdly. The lungs of animals which have perished in pulverulent matters present shades of red intermediate between that found in the lungs of animals which have died in the open air, and that found in the lungs of those which have died asphyxiated.—*Journal de Médecine de Bordeaux*, April, 1851.

Honours conferred on British Physicians practising in Foreign Countries.

We have had much pleasure in perceiving that the President of the French Republic has named our fellow-countryman, Dr. Higgins, of Paris, Knight of the Legion of Honour. This distinction was granted on the proposition of the Minister of Public Instruction, and is the more flattering as but few nominations were made since the establishment of the Republic. Louis Philippe's ministers had so abused the privilege, that one of the first acts of the National Assembly was to decree that no nomination could hereafter be made without the motives for granting such a distinction being published in the "Moniteur;" a regulation which has proved a wholesome check to intrigue.

Lord Bloomfield, lately the British Ambassador at the Court of St. Petersburgh, has forwarded to us, with a request for their publication in our Journal, a copy of an Imperial Rescript addressed by the Emperor Nicholas to Sir James Wylie, and an account of this celebrated surgeon's military and medical services. Sir James Wylie is by birth a Scotchman, but has been in the Russian service for more than sixty years. With Lord Bloomfield's request we gladly comply, as these documents afford a proof, in addition to the one we have given above, of how highly medical men are estimated in foreign countries, and of the position abroad to which talent, industry, and merit may raise our countrymen:—

"The Rescript of the Most August Emperor to Sir James Wylie, Baronet, Chief Inspector of the Medico-Chirurgical Department of the Army, one of his Imperial Majesty's Privy Council. 16th September, 1850:

"The Medico-Chirurgical Academy, over which you have pre-

sided for thirty years, celebrates the fiftieth anniversary of its institution. The vast benefits conferred upon the State by this Academy, from which physicians distinguished for learning, skill, and professional zeal, continually emerge, deserve to be borne in grateful remembrance; but with these is closely connected the indelible memory of the deeds of public utility accomplished by you during a long series of years, in which you were an example to the military surgeons who had been educated under your superintendence.

"Whereas the present happy occasion appears to us a suitable time to bestow honour on the head of the Medical Department, we have, of our benevolence, thought fit to certify to you our thanks for your services, both in relieving human suffering, and in advancing the interests of the Medico-Chirurgical Academy.

"Given under our hand,

"NICHOLAS."

Sir James Wylie, Baronet, Inspector-General of the Medical Department of the Army, and Privy Councillor, was present at the following battles:

In 1793 and 1794 in Courland, Samogitia, near Bouchalat, in Lithuania, against the Poles.

In 1805 at Wischau, and afterwards at Austerlitz (Napoleon being at Brunn), against the French vanguard which was under the command of General Sebastiani.

In 1807 near Gutstadt, Ankendorf, on the Passarge, at Heilsberg, Friedland, &c.

In 1812 near Vitepsk, Smolensko, Borodino, Tarutino, Malo-Jaroslavetz, Viazma, Krasnoi, Elnia, as far as Wilna; and lastly as far as the Niemen.

In 1813 and 1814 in Germany, near Lutzen, Bautzen, Dresden, Culm, Leipsic, Hanau; in France, near Brienne, Bar-sur-Aube, Arcis, Fere-Champenoise, Belleville, and Montmartre, under the walls of Paris.

In 1828 in Turkey, at the investment and taking of the fortresses of Braïloff, Shumla, and Varna (sent by order of his Imperial Majesty to the southern bank of Varna to pick up those who were killed and wounded), under General Bistrom, against Omer Vrioni, and followed the same night by General Souvaroff.

Decorations and orders have been granted to Sir James Wylie, for services in the field of battle, by the following sovereigns:

The Empress Catherine II. (silver medal); the Emperors Paul I., Alexander, and Nicholas of Russia; Francis I. of Austria, and Napoleon Bonaparte of the French; by the Kings of Great Britain, France, and Bavaria; by two Kings of Wirtemberg, and two Kings of Prussia. A diamond ring was also given him by Queen Charlotte of Prussia, mother of her Majesty the Empress Alexandra Feodorovna, at Memel, for having cured her, during the journey of the Emperor Alexander to Erfurt to hold the interview with Napoleon. Lastly, from the Viceroy of Italy, on the part of the Empress Jose-

phine and Queen Hortense de Malmaison, a diamond box, bearing the cypher "Eugene," which had been given to him by the Emperor Alexander himself.

The following note to the foregoing statement is appended by Sir James Wylie himself:

"On the occasion of the first Swedish war, A. D. 1808, I went with the medical staff to Finland; and on the termination of the second war I accompanied the august Emperor Alexander to Tornea. In 1812 and the following years, during the height of the war, I, with the medical men who had been educated in the Medico-Chirurgical Academy, had the charge of the wounded in the field of battle to the city of Austerlitz, in Germany; in Russia, from the river Niemen to Moscow. In subsequent campaigns I twice accompanied the same medical officers, who were with the Russian troops, to Paris; on which occasion the Emperor Alexander, of glorious memory, received the cordial thanks, not only of all the Allied Princes, but also, at Erfurt, of Napoleon himself, on account of the zeal displayed by the medical men in the care of the wounded. In 1828 and the following year, during the Turkish war, in the reign of the Emperor Nicholas I., and under the Grand Duke Michael, Commander-in-chief, the medical officers, who had formerly been pupils of the Academy, following my example and instructions, were distinguished for zeal and assiduity in their attendance on the sick at Shumla, Varna, and as far as Hamus.

"Now in my eighty-second year, I have, under four autocrats, viz. the Empress Catherine II., the Emperors Paul, Alexander, and Nicholas, travelled in attending the army, either on foot or on horseback, or in a carriage or sledge, more than two hundred thousand versts [150,000 English miles]. Under these circumstances I have seen, and, as Chief Inspector of medical affairs, have had committed to my care more than six hundred thousand sick or wounded soldiers, in almost every European country except Spain, and in Asia.

"In these various wars I have been three times wounded, viz.: 1st, with a dagger in the middle of the right thigh; 2ndly, by a musket-ball in the left shoulder; and 3rdly, in the left hand, rendering it necessary to amputate the index finger."

INDEX

TO THE TWELFTH VOLUME.

The letters D. P. S. refer to the reports of the Dublin Pathological Society.

A.

Abscess of liver, Dr. Banks' case, D. P. S., 199; sub-peritoneal, in contact with bladder and rectum and opening into the ileum, 45.
Academy of medicine, hints for the formation of an Irish, 110.
——— commission of the French, in the case of the Manni prize, 112.
Acton on syphilis, *Rev.*, 91; opinion on plurality of diseases, 93.
Acupuncture in the treatment of unconsolidated fracture, M. Lenoir on, 241.
Adams, Mr. J., the anatomy and diseases of the prostate gland, by, *Rev.*, 465.
Address to the Belfast Medical Society, Dr. Stephenson's, *Rev.*, 470.
Air-passages, foreign bodies in, Dr. Jobert de Lamballe on, 237.
Albuminous urine in dropsies, Dr. Osborne on, 1; specific gravity of, 3; from ligature of emulgent veins, 8; treatment of, 13.
Amputation, Mr. Butcher's cases of, 209; first, below the knee, subsequent to the removal of the foot at the tibio-tarsal articulation; second, at the shoulder-joint, during spreading gangrene, consequent on disease of the elbow-joint, 209; use of a new saw in, 215.
Anatomy and physiology, Cyelopædia of, by Dr. Todd, part xli., *Rev.*, 191.
——— and diseases of prostate gland, Mr. Adams on, *Rev.*, 465.
Aneurism of aorta, Dr. Banks' case, 71.
——— femoral, Dr. Hargrave's case of, treated by compression, 204.
——— and varicose veins treated by galvano-puncture, Professor Schuh on, 493.
Aorta, ulceration of, Dr. Ross' case, death from hemorrhage into the pericardium, 225.
Apology for the microscope, Dr. Lyons, *Rev.*, 157.
Arachnoid, effusion into, 472; hemorrhage into, 472.
Art and science of medicine, Dr. Wegg on, *Rev.*, 182.
Atrophy of laryngeal muscles, 75.

B.

Badeley, Dr., on the reciprocal agencies of mind and matter, *Rev.*, 377.
Banks, Dr., clinical reports and observations on medical cases, 64; plastic bronchitis, cases of, 65, 69; treatment of, by mercury, tartarised antimony, &c., 70; aneurism of aorta, case of, with

atrophy of laryngeal muscles, 71, 77; musical bruit in subclavian and carotid arteries in a case of pneumonia, 77; ichthyosis, treatment of, by external and internal employment of cod-liver oil, 80; diseases of liver, D. P. S., 144; hemorrhage, case of, D. P. S., 196; liver, abscess of, D. P. S., 199; stomach, ulcer of, D. P. S., 200; cyst in brain, D. P. S., 202.

Barton, Mr., on the causes, nature, and treatment of Hong Kong fever, 335; the endemic fever distinctly periodic, and should be classed with intermittent and remittent, 335; causes of, physical geography of Hong Kong, city of Victoria, 336; contrast between the health of the naval and military forces, 342; phenomena of the disease, 349; treatment, 353.

Beale, Mr., on the laws of health, *Rev.*, 161.

Berenguier, Dr., report on infanticide by immersion of child in pulverulent substances, 496; medico-legal difficulties; case of body of child concealed in a large grease-pot filled with ashes; determination of question as to the child having been born alive or not, mode of death, 496.

Bernard, M., experiments on the production of the condition of apparent death, 119.

Bird, Dr. Golding, on urinary deposits, *Rev.*, 191.

Bouchut, M., on the signs of death, *Rev.*, 107; continued absence of the cardiac sounds the only unequivocal sign of death, 115.

Bougie, use of, in stricture, Dr. Wilmot on, 49.

Brain, cyst of, Dr. Banks' case, D. P. S., 202; Dr. Little's case of fatal injury of, 226.

Bright's disease, case of, with phthisis, 477; with emphysema, 478.

Bronchiektasis, Dr. Rapp on, 489.

Bronchitis, plastic, 65.

Brown-Séquard, experiments on cadaveric rigidity, 133; influence of injection of blood on, 133.

Bruit, musical, in subclavian and carotid arteries in a case of pneumonia, 77.

Butcher, Mr., cases of amputation, 209; use of a new saw, 215.

C.

Calculus, uterine, case of removal of, 494.

Camera lucida, Dr. Steele on a new and simple form of, 487.

Cancer of stomach, Professor Smith's case of, D. P. S., 193.

Carte's aneurismal compressor, successful use of, 204.

Chloroform, application of, to surgical purposes, Dr. Fleming on, *Rev.*, 177.

Churchill, Dr., on ovarian irritation, 82; considerations to show that it is not an inflammatory disease, characteristics of, 83; pathology of, connexion with menstrual disorder, 86; diagnosis, treatment, 87, 89.

Cirrhosis of liver, Dr. M'Dowel on, D. P. S., 201; obliteration of vena porta accompanying, 201.

Cloc, Dr., on the external use of an aqueous solution of tartar emetic, 240.

Compression, use of, in case of femoral aneurism, Dr. Hargrave on, 204; use of Dr. Carte's compressor, duration of treatment did not exceed twenty days, 205.

Congestion, cerebral, case of, 472.

Copeman's report of midwifery cases, *Rev.*, 134.

Crosse, Dr., cases in midwifery by the late, *Rev.*, 134.

Curling, Mr., on diseases of the rectum, *Rev.*, 448.

Curry, Mr. Eugene, letter to Dr. Neligan on the use of the word "hippo" in Ireland, 230.

Cyclopædia of anatomy and physiology, Dr. Todd's, part xli., *Rev.*, 191.

Cyst of brain, Dr. Banks' case of, D. P. S., 202.

Cystitis, chronic, with consumption, Dr. Malcolm's case, 41.

D.

Dalrymple, Mr., on the pathology of the human eye, *Rev.*, 192.
D'Andrea, Professor, case of removal of uterine calculus by, 494.
Death, signs of, M. Bouchut's treatise on, *Rev.*, 107; of death, its phenomena and means of recognising them, 115; experiments of commissioners (Magendie and Rayer), with report, 120; experiments of M. Bernard, 119; verification of death by medical officer, 133; total absence of cardiac sounds to auscultation the only unequivocal sign of, 115.
Deposits, urinary, Dr. Golding Bird on, *Rev.*, 191.
Dickinson, Dr., on the Flora of Liverpool, *Rev.*, 454.
Digitaline, mémoires sur la, by Homolle and Quevenne, *Rev.*, 147.
Diseases of rectum, Mr. Curling on *Rev.*, 448.
Diseases of stomach, diagnosis of, Dr. Kennedy on, 365.
Doherty, H., on kinesipathy or medical gymnastics, *Rev.*, 421.
Düben, Baron von, on kinesipathy, *Rev.*, 421.
Duchenne, Dr. (de Boulogne), on the physiological and therapeutical effects of electricity, 278; physiological properties of statical electricity, electro-positive and negative bath, 279; electrization by sparks and by Leyden jar, 280; physiological properties of dynamic electricity, Faradism (electricity by induction), 289; therapeutical effects of statical, dynamic, galvanic, and inductive or Faradic, 293–301.

E.

Electricity, Dr. Duchenne on medical, 278; Faradic, 278.
Emphysema of lungs, Dr. Neligan's case, D. P. S., 195; Dr. Frey on the physiology of, 487.
Epistaxis, Sir Henry Marsh on, 257.
Eye, pathology of human, Dalrymple on, *Rev.*, 192.

F.

Faradism (electricity by induction) Dr. Duchenne on, 289.
Fever, Hong Kong, Mr. Barton on, 335.
——— the identity or non-identity of typhoid and typhus, Dr. Jenner on, *Rev.*, 434; doctrines of Broussais, 437; opinions of Louis, Andral, and Chomel, 438; characters of the rash, 443; pathological appearances presented in the two diseases, 445.
Fleming, Dr., on the application of chloroform to surgery, *Rev.*, 177.
Flora of Liverpool, Dr. Dickinson on, *Rev.*, 454.
Fœtus, malformation of, Dr. Sinclair's case of, 481; Mr. O'Donovan's case of, 482.
Forceps, Dr. O'Grady's, for uterine polypi, 242.
Foreign bodies in air-passages, Dr. Jobert de Lamballe on, 237; greater tendency to lodge in right than in left bronchus; penetration of into larynx takes place during greatest possible divergence of the chordæ vocales, 237; statement that the epiglottis is never depressed on the superior orifice of the larynx, 238; bodies which measure more than four lines do not admit of expulsion by the natural efforts, 238; necessity of a free opening in air-tube, 239.
Fracture, unconsolidated, of thigh, cured by acupuncture, Dr. Lenoir on, 241.
Frey, Dr., on the physiology of emphysema of the lungs, 487.
Fumigations with cherry-laurel water in hooping-cough, Dr. Pavesi on, 243.

G.

Gall-bladder and liver, disease of, 478.
Galvanism, medical uses of, Dr. Duchenne (de Boulogne) on, 278.

Galvano-puncture in the cure of varicose veins and aneurisms, Dr. Schuh on, 493.
Georgii on kinesipathy, 424.
Gymnastics, Swedish central institute of, *Rev.* of works on, 420; *vide* kinesipathy.

H.

Hargrave, Dr., case of femoral aneurism cured by compression, 204.
Health, Beale on the laws of, *Rev.*, 161.
Heart, sounds of, continuance of in syncope, 115; total and continued absence of, the only and unequivocal sign of death, 115, &c.
——— dilated, 476; with valvular disease, 474; hypertrophy of, with disease of aortic valves, 475.
Heat, effects of solar and artificial, Dr. Charles Moore's cases illustrative of, 235.
Heidenhain, Dr., on spinal irritation, 491.
Hemorrhage, Dr. Banks' case of, D. P. S., 196; Dr. Ross' cases, 224, 225.
Hemorrhages, the, observations on, by Sir Henry Marsh, 257.
Hernia, strangulated (congenital), Dr. Smith's case, D. P. S., 197; Dr. Ross' case, 225.
Higgins, Dr., nominated knight of the French Legion of Honour, 502.
Hippo, on the use of the word, in Ireland, by Dr. W. D. Moore, 230; Mr. E. Curry on, 230.
Homolle and Quevenne, MM., on digitaline, *Rev.*, 147.
Hong Kong, fever of, Mr. Barton on, 335.
Honours conferred on British medical men by foreign powers, 502.
Hooping-cough, on the use of cochineal, fumigations with cherry-laurel water, the use of vegetable acids, &c., in the treatment of, Dr. Pavesi on, 243.
Hospital, Belfast General, Dr. Malcolm's history of, *Rev.*, 470.
——— for insane, notice of, *vide* insanity, works on, *Rev.*, 337.

I.

Icthyosis, Dr. Banks on the treatment of, by cod-liver oil, 80.
Infanticide, Dr. Berenguier on, 496.
Insanity and hospitals for the insane, *Rev.* of works on, 337, *vide* Reports.
——— remarks on, by Henry Monro, M. B., *Rev.*, 377.
——— American Journal of, *Rev.* 377; Journal of Psychological Medicine, 377.
Institute, the National, of France, notice of its constitution, 109; its scientific sections, prize endowments, formation and constitution of commissioners to determine on merit of prize essays, 109.
Intussusception, case of, in an infant, 479.
Irritation, ovarian, Dr. Churchill on, 82.
——— spinal, Dr. Heidenhain on, 491.

J.

Jenner, Dr., on the identity or non-identity of typhus and typhoid fevers, *Rev.*, 434.
Journal, American, of Insanity, *Rev.*, 377.
——— Psychological, *Rev.*, 377.

K.

Kennedy, Dr. Henry, on the diagnosis of diseases of the stomach, 365; black vomit, value of, as a diagnostic sign of malignant disease, 369; mobility of tumours by process of respiration, 370; disappearance of a palpable tumour accountable in either of two ways, 371; post mortem appearances of the stomach, 374.
Kidd, Dr., memoir of the late, 252.
Kidney, diseases of, Dr. Lees on chronic vomiting as symptomatic of, 19; treatment of, 29.
Kinesipathy (Swedish medical gymnastics), *Rev.*, 421; Dr. Roth on,

P. H. Ling on, Georgii on, Doherty on, 421.

L.

Labour with occlusion of the vagina, Dr. Sawyer's case of, 484.
Lamballe, Dr. Jobert de, on foreign bodies in the air-passages, 237; on the operation of tracheotomy, 237.
Landi, Dr., on epidemic catarrhal ophthalmia, *Rev.*, 146.
Lane, Dr., compendium of materia medica and pharmacy, *Rev.*, 455.
Larynx, muscles of, atrophied in case of aneurism, 78; perichondritis of, 489.
Lees, Dr., on chronic vomiting as symptomatic of disease of the kidneys, 19.
Lenoir, M., on unconsolidated fracture of the thigh treated by acupuncture, 241.
Ling, H. P., on kinesipathy, *Rev.*, 421.
Little, Dr., case of fatal injury of brain, 226.
Liver, disease of, Dr. Banks' case of, D. P. S., 191.
——— abscess of, Dr. Banks' case of, D. P. S., 199.
——— cirrhosis of, Dr. M'Dowel's case of, D. P. S., 201.
Lizars', Mr., observations on stricture of the urethra and fistula in perineo, *Rev.*, 136.
Lunacy, *vide* Insanity, Reports, &c., 377.
——— suggestions for additions to the law of lunacy, by P. B. Purnell, *Rev.*, 377.
Lyons, Dr., apology for the microscope by, *Rev.*, 157.

M.

Mackness, Dr., memorials of, *Rev.*, 430.
Magendie and Rayer, corroborative experiments by, on M. Bouchut's observations with regard to the condition of apparent death, 120.
M'Dowel, Dr., case of diseased condition of vena porta, D.P.S., 201.
Malcolm, Dr., on difficulties of diagnosis, with illustrative cases, 30; simulation of disease, 34; latent tubercular disease, with chronic cystitis, 41; sub-peritoneal abscess in contact with bladder and rectum, 45; history of Belfast General Hospital, *Rev.*, 470; report on the pathological museum of the Belfast Medical Society, 471–481.
Malmsten, Dr., on perichondritis laryngea and ulcer of œsophagus, 489.
Manni, Professor P., of Rome, his munificent donation of 1500 francs to the Academy of Sciences, to found a prize to be given to the author of the best memoir on the signs of apparent death, 111.
Marsh, Sir Henry, observations on the hemorrhages, 257; epistaxis, remarkable case of oozing of blood from integuments of face, 259; epistaxis caused by mental emotion, 262; remarkable instance of, 264.
Microscope, apology for, Dr. Lyons', *Rev.*, 157; new camera lucida for, by Dr. Steele, 487.
Midwifery, practical, and diseases of women, Dr. Roberton on, *Rev.*, 99.
——— cases in, by Dr. Crosse and Dr. Copeman, *Rev.*, 134.
Miquel, Dr. on the coatings of the tongue, 244.
Monro, Dr., remarks on insanity by, *Rev.*, 377.
Monster, Mr. O'Donovan's case of double, 482.
Moore, Dr. W. D., on the latent periods of scarlatina, 302; period of latency, 303; possibility of checking the spread of the disease, 309; on the use of the word "hippo" in Ireland, 230.
——— Dr. C. F., cases illustrative of the effect of solar and artificial heat, 235.
Morton, Dr., on varicocele, 319.
Muscles, laryngeal, atrophy of, in case of aneurism, 75; cadaveric

rigidity of, opinions of Nysten and Sommer, Valentin, Ehrmann, &c., 131.
Museum of Belfast Pathological Society, report of, 471–481.

N.

Neligan, Dr., on emphysema of the lungs, D. P. S., 195.
Nevins', Dr. T. Birkbeck, translation of new London pharmacopœia by, *Rev.*, 455.
Nysten, theory of irritability of muscles to account for cadaveric rigidity, 132.

O.

O'Donovan, Mr., case of double monster, 482.
O'Grady, Dr., on a new forceps for the removal of uterine polypi, by the combined influence of pressure and caustic, 232.
Ophthalmia, catarrhal, Dr. Landi on, *Rev.*, 146.
Osborne, Dr., further observations on dropsies with albuminous urine, 1.
Ovaries, irritation of the, Dr. Churchill on, 82.

P.

Pavesi, Dr., on hooping-cough, and its treatment by cochineal, fumigations, vegetable acids, &c., 243.
Pericardium, death from hemorrhage into, Dr. Ross' case, 225.
Pericarditis, acute case of, during convalescence from fever, 476.
Perichondritis laryngea, Professor Malmsten on, 489.
Peritonitis, acute, case of, 479.
Pharmacopœia, the new London, Dr. Nevins' translation of; the new London, Mr. Phillips' translation of; compendium of materia medica and pharmacy adapted to, by Dr. Lane, *Rev.* 455.
Phillips', Mr., translation of the London pharmacopœia, *Rev.* 455.
Phthisis, case of, complicated with pleuritis, 473; case of, 474.
Pneumonia, case of, with musical sound in subclavian artery, 77.
Pneumo-thorax with phthisis, 473.
Polypi, uterine, Dr. O'Grady's forceps for the removal of, 232.
Powders, preparation of, Dr. Wittke on, 499.
Prescriber's pharmacopœia, by a practising physician, *Rev.*, 455.
Prize, Professor Manni's donation of money to French Academy of Sciences, 111.
——— adjudication of the Manni, 111.
Proceedings of Dublin Pathological Society, 193.
Prostate gland, Mr. Adams on anatomy and disease of, *Rev.*, 465.
Psychological Journal, *Rev.* 377.
Purnell, Mr., suggestions for additions to the law of lunacy, *Rev.* 377.
Purpura hemorrhagica, case of, 479.

Q.

Quevenne and Homolle, MM., on digitaline, *Rev.*, 147.

R.

Rapp, Dr., on bronchiektasis, 489.
Rectum, Mr., Curling on diseases of, *Rev.*, 448.
Remittent fever of Hong Kong, Mr. Barton on, 335.
Report on the pathological museum of the Belfast Medical Society, by Dr. Malcolm, 471–481.
——— on the lunatic asylums in Ireland, presented to both Houses of Parliament, *Rev.*, 376.
——— of medical officers of hospitals for insane in Great Britain and Ireland, *Rev.*, 391.
——— of commissioners in lunacy to Lord Chancellor, 393.
——— of Crichton royal institution for lunatics, 401.
——— of county Suffolk lunatic asylum, 402; Somerset lunatic asy-

lum, 404; Oxfordshire and Berks lunatic asylum, 407; royal Glasgow lunatic asylum, 376; West York pauper lunatic asylum, 409; Gloucester lunatic asylum, 410; of asylums of Belfast, Carlow, Clonmel, and Maryborough, 411, 412, 413; Edinburgh lunatic asylum, 416; North Wales lunatic asylum, 416; royal Bethlem hospital, 417; of alleged lunatics' friend society, 418.

Rigidity, cadaveric, different theories to account for, considered, 131; a *remote* sign of death as distinguished from the *immediate*, 131; opinions of Nysten and Sommer, Valentin's experiments, opinions of Orfila and Béclard, Brown-Séquard, 132.

Roberton's essays and notes on the physiology and diseases of women, and practical midwifery, *Rev.*, 99.

Roth, Dr., on the prevention and cure of chronic disease by movements, *Rev.*, 421; *vide* kinesipathy.

Ross, Dr., cases from practice, 223; strangulated femoral hernia, 223; disease of cervical vertebræ, 224; ulceration of aorta, death from hemorrhage into pericardium, 225.

S.

Saw, Mr. Butcher's new, for amputation, 215.

Sawyer, Dr., case of occlusion of the vagina complicating labour, 484.

Scarlatina, on the latent periods of, Dr. W. D. Moore on, 302.

Schuh, Professor, on galvano-puncture in the cure of varicose veins and aneurisms, 493.

Section, perineal, Mr. Lizars on, *Rev.*, 136.

Sinclair's, Dr., case of malformation of fœtus, 481.

Skin, portraits of diseases of, Mr. Erasmus Wilson's, *Rev.*, 192.

Smith, Professor R. W., case of cancer of stomach, D. P. S., 193; case of strangulated congenital hernia, D. P. S., 193.

Society, pathological, of Dublin, proceedings of, 193.

——— Belfast Medical, report of Pathological Museum of, by Dr. Malcolm, 471, 481.

Squire, Mr. P., translation of the new London pharmacopœia, *Rev.*, 455.

Steele, Dr., on a simple and effective form of camera lucida, 481.

Stomach, Dr. Kennedy on diseases of, 365; cancer of, D. P. S., 193; ulcer of, Dr. Banks' case of, D. P. S., 200.

Stricture of rectum, 45; urethra, Dr. Wilmot on, 49; Mr. Lizars on, *Rev.*, 136.

Syme, Mr., opinions of; on perineal section, considered, *Rev.*, 137.

Syncope, condition of; modification of the older definition by Hoffmann and Cullen, 113; continuance of cardiac sounds in, under all circumstances, experiments in support of this position, 115, *et seq.*

Syphilis, Mr. Acton on, *Rev.*, 91.

T.

Tartar emetic, external use of, Dr. Cloc on, 240.

Thomson, Dr. on the treatment of varicocele, 326.

Tilt, Dr. on the preservation of the health of women, *Rev.*, 420.

Todd, Dr., cyclopœdia of anatomy and physiology, part xli., *Rev.*, 191.

Tongue, coatings of, Dr. Miquel on, 244.

Tubercular disease, latent, Dr. Malcolm's case, 41; simulation of, Dr. Malcolm's case, 34.

Typhoid and typhus fevers, Dr. Jenner on the identity or non-identity of, *Rev.*, 434.

U.

Urethra, stricture of, Dr. Wilmot on, 49; Mr. Lizars on, *Rev.*, 136.

Uterus, polypi of, Dr. O'Grady's forceps for removal of, 232.

V.

Vagina, occlusion of, complicating a case of labour, Dr. Sawyer on, 484.
Valentin, experiments on cadaveric rigidity, 131.
Varicocele, Dr. Morton on the treatment of, 319; Dr. Thomson, of Dalkeith, account of his success in the treatment of, 326.
Varicose veins treated by galvano-puncture, 493.
Vena porta, diseased condition of, with cirrhosis of liver, Dr. M'Dowel on, D. P. S., 201.
Veins, varicose, treated by galvano-puncture, 493.
Vertebræ, cervical, disease of, Dr. Ross' case, 224.
Vomiting, chronic, symptomatic of renal disease, Dr. Lees on, 19.

W.

Wegg, Dr., on the science and art of medicine, *Rev.* 182.
Wilmot, Dr., some remarks on the effects of treatment of stricture of the urethra by the bougie, 49.
Wilson, Erasmus, portraits of diseases of the skin by, *Rev.*, 192.
Wittke, on the preparation of powders for medical purposes, 494.
Women, preservation of the health of, Dr. Tilt on, *Rev.*, 420.
Wylie, Sir James, his medical services, 503; honours conferred upon, 502.

END OF VOL. XII.